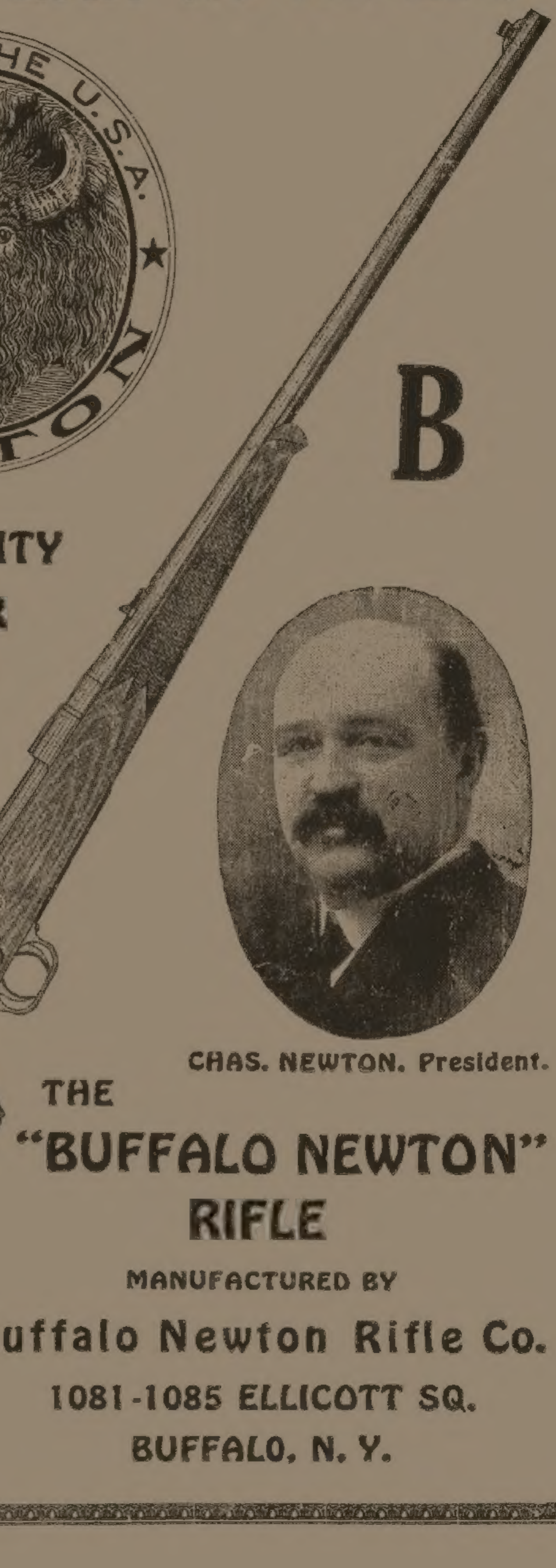
A NEW ERA IN RIFLES



B

MORE VELOCITY
MORE POWER
LESS RECOIL
THAN ANY
OTHER
RIFLE
IN THE
WORLD

CHAS. NEWTON. President.

THE

"BUFFALO NEWTON"

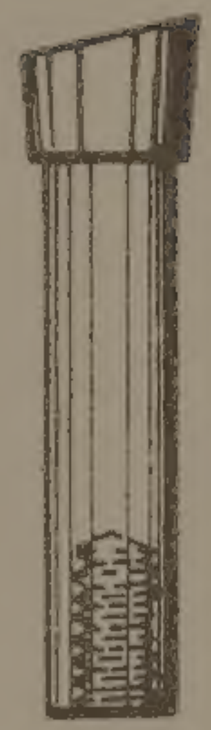
RIFLE

MANUFACTURED BY

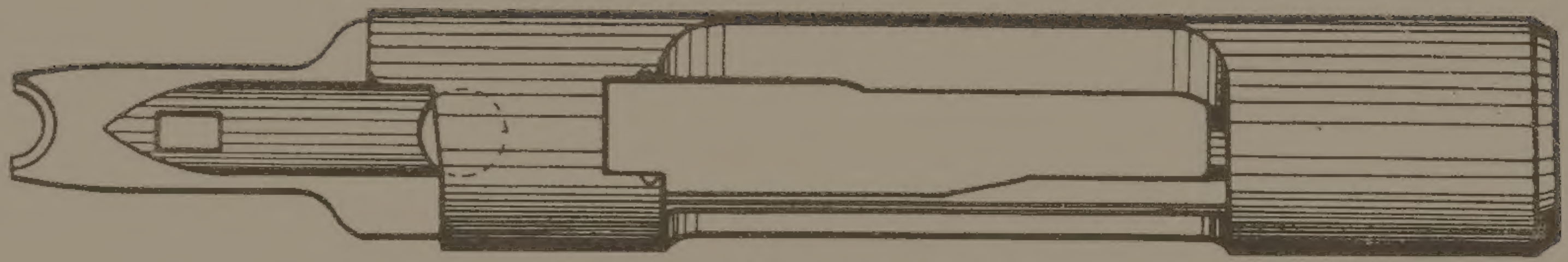
Buffalo Newton Rifle Co.

1081-1085 ELLICOTT SQ.

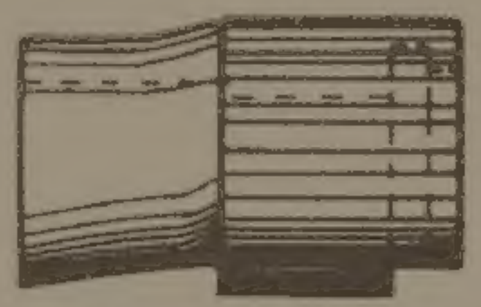
BUFFALO, N. Y.



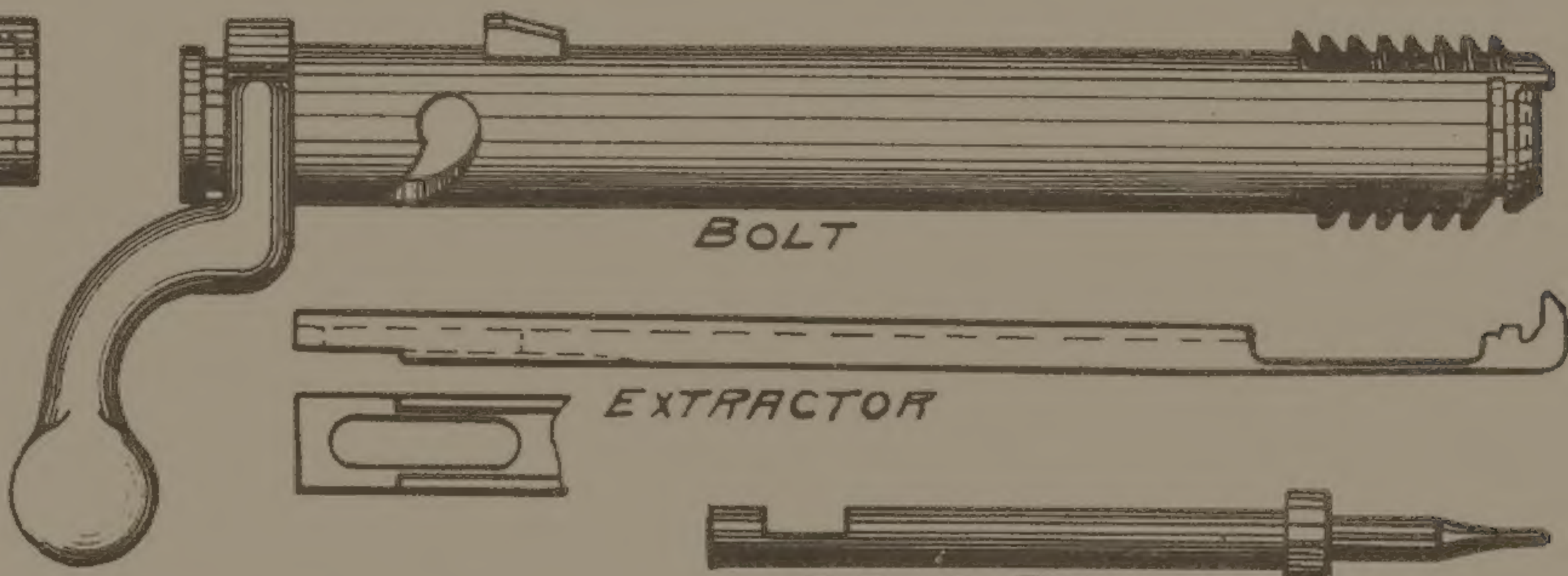
REAR LOCK



RECEIVER



SLEEVE

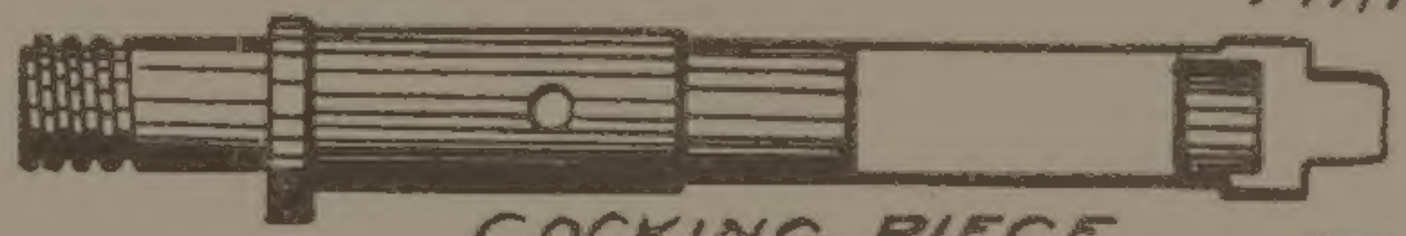


BOLT

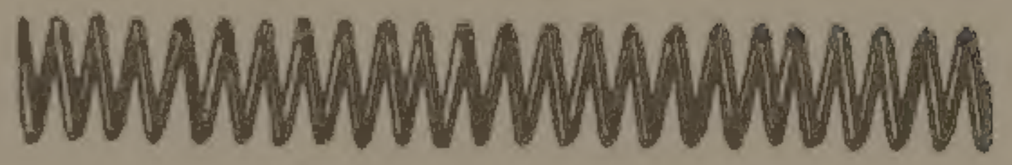
EXTRACTOR

FIRING PIN

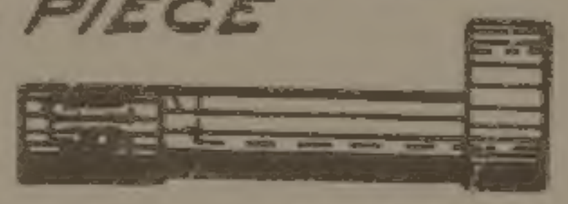
SAFETY



COCKING PIECE

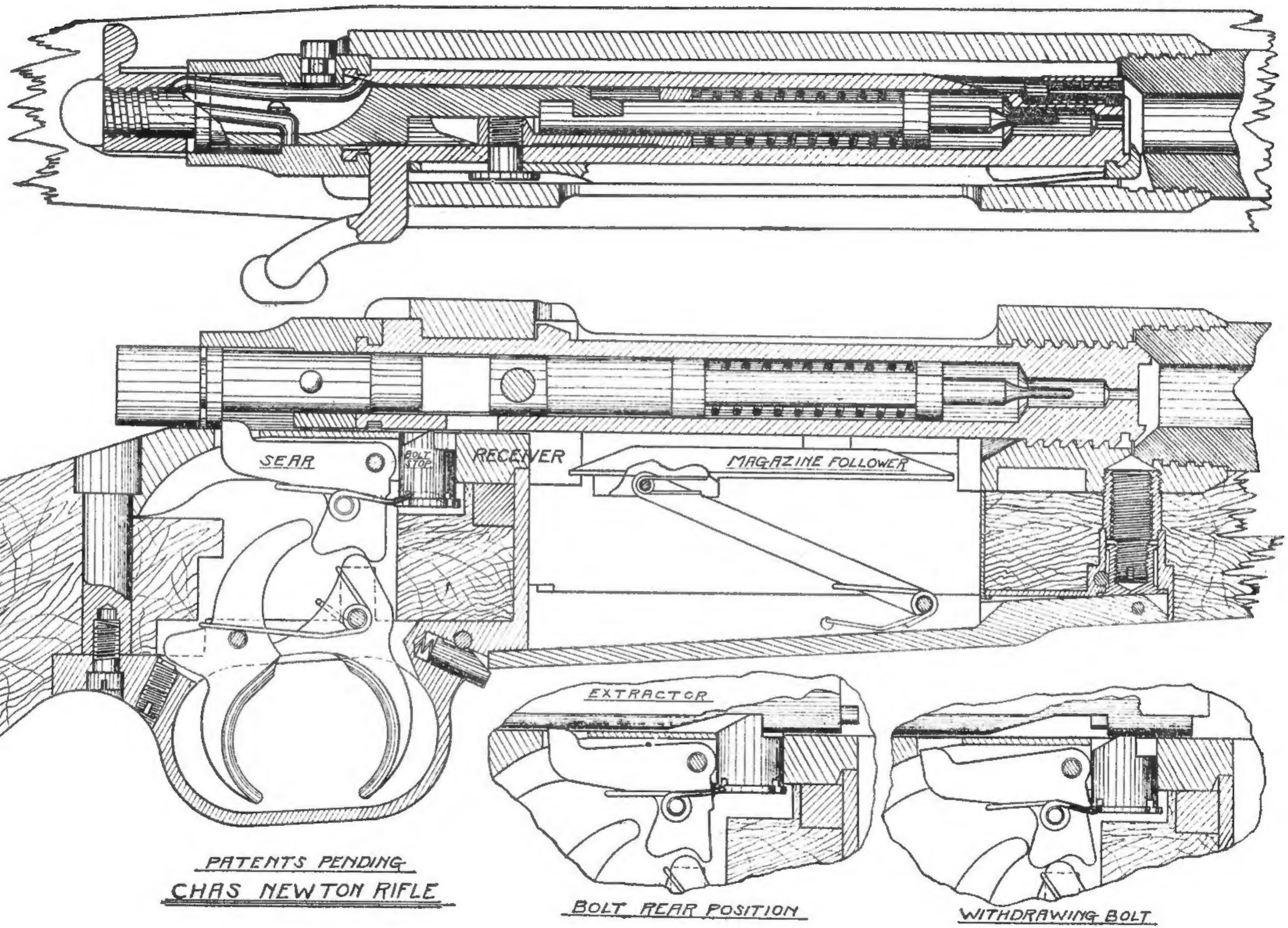


MAIN SPRING



COCKING BUSHING

COCKING STUD



PATENTS PENDING

CHAS NEWTON RIFLE

BOLT REAR POSITION

WITHDRAWING BOLT

The "Buffalo Newton" Rifle

SPECIFICATIONS

Our rifles are bolt action, box magazine repeating rifles, and are made for the following cartridges, viz:—

.256 Newton, .280 Newton, .30 Newton, .35 Newton and .30 U.S.G., model 1906. The magazine holds five cartridges of the .256 Newton and .30 U.S.G., calibers, four of the .280 Newton caliber or three of the .30 Newton and .35 Newton sizes.

The weight is about 7¾ pounds each in the .256 Newton, .280 Newton and .30 U.S.G. calibers, and about 8¼ pounds in the .30 Newton and .35 Newton calibers. These latter calibers have somewhat heavier barrels.

The barrel length is 24 inches. Stock length 14 inches.

Drop at heel 2¾ inches. Drop at comb, 1¾ inches.

The stock has a 'castoff" to the right of ¼ inch at the heel and ⅜ inch at the toe. This is exactly the lines of the old model Newton stock, which accounted for the splendid balance and handling of that arm.

The rifle is furnished with either single, or "double set" trigger.

The stock is of the best quality thoroughly seasoned American walnut, oil finished, with pistol grip, checked grip and forearm, as shown in the cut, steel buttplate and pistol grip cap.

Our barrels are of the best quality of nickel steel, while our receiver, bolt and other parts which are required to withstand strain or shock of any kind are of chrome vanadium steel of the same quality as used for automobile axles, steering knuckles, etc., which must be able to withstand shocks and strains indefinitely without crystallization or breaking.

PRICES

Price of standard rifle $60.00 each. Discounts to dealers only.

As extras, we furnish—

Sling swivels, per pair, $1.75.

Kerr patent adjustable web sling strap, $1.50 each.

Newton peep sight on sleeve, $6.00 each.

Lyman No. 48 peep sight, $11.50 each. Attached, $13.50.

AMMUNITION

CARTRIDGES for our rifles are manufactured by the Western Cartridge Co. of East Alton, Ill., who catalogue them and sell them through the regular trade channels. We buy from them, on the same terms as any large dealer. However, the Western Co., load these cartridges to about 100 foot seconds less than their full power as yet, therefore, in order that our customers may have the best we purchase the shells and bullets and load them ourselves, with hand weighed charges, to a standard pressure of 54000 lbs., per square inch, using the powders best adapted to them, thus obtaining the ballistics given in the tables.

These cartridges cost more to produce than do the factory machine loaded goods, therefore, while we sell them at the same retail prices as charged for factory goods, yet we cannot allow as large discounts to the trade as they. Our prices are as follows:

CARTRIDGES

.256 Newton, full power, target, midrange or short range	$10.45 per 100
.280 Newton, full power, target, midrange or short range	10.45 per 100
.30 Newton, full power, target, midrange or short range	10.45 per 100
.35 Newton, full power, target, midrange or short range	10.45 per 100

The above are the same prices at which the .30 U.S.G. of whatever make sells.

COMPONENTS for above Cartridges

Empty primed shells, all calibers.....	$4.05 per 100
Bullets, all weights and calibers	2.75 per 100
Primers	.38 per 100

All prices F. O. B. Buffalo, N. Y.

All prices subject to change without notice. In case of a general reduction of price of cartridges or components we expect to reduce our prices accordingly, that the price of cartridges for the Newton rifles shall be no greater than that charged for the .30 U.S.G., model 1906 with sporting load.

We do not handle powder because it can be shipped only by freight; your dealer has or will get it from the manufacturers agencies. Neither cartridges, primed shells or primers can go by mail, as all are classed as explosives.

DESCRIPTION

The "Buffalo Newton" is the perfected high power rifle wholly designed by Charles Newton from buttplate to muzzle, and is thus a 100% American product.

This rifle may well be said to mark a new era in rifle design and construction.

The German Mauser rifle has during the past forty years, led the van of bolt action rifles and the principles embodied in its design have so thoroughly demonstrated their reliability that today this system has been almost universally adopted for military arms, including the American Springfield and the new British Enfield—and the sporting rifles follow the military. The Mauser design was worked out in days, and among people, when and where hand labor was the rule, and machine manufacture the exception, and the sole ends in view were the certain movement of the cartridge from the magazine to the chamber, the positive confinement of the cartridge in the chamber during the explosion, and the certain and easy extraction of the fired shell. These points the Mauser design accomplished in the greatest degree attained by any system, they are the basis of its popularity, and they are the ones kept in view in the different models which have since been worked out from the Mauser basis, including our own.

On the other hand very little attention was given to embodying in the rifle such little refinements as would tend to make its operation easier, faster and more convenient for the sportsman, and apparently no attention was given to the question of adapting the design to being manufactured by machinery, this a vitally important point from the standpoint of the sportsman as well as of the manufacturer, as it is directly involved in production cost and ultimately finds expression in the selling price.

When Mr. Newton essayed the task of producing "the best ever" in a sporting rifle, he based it upon the Mauser system, because of the rugged strength, simplicity and certainty of its operation. But he realized that that action was capable of many refinements which would render it more desirable as a sporting weapon, without in any way detracting from its primary good qualities; likewise of many, very many, modifications which would, without detracting in the least from those good qualities, vastly decrease the cost of manufacture by adapting the different parts to machine manufacture. As a measure of this reduction in manufacturing cost, largely accomplished by the use of parts made in whole or in part upon automatic screw machines, instead of milling them from forgings, we may state that where the Springfield, the best of the Mauser type, requires

540 different machine operations to produce a single rifle, the Buffalo Newton requires but 113 machine operations to produce the same result—this exclusive of automatic screw machine and punch press work, the labor on which is nominal. This means that to manufacture the Buffalo Newton requires but 20 per cent the labor, machinery, tools, plant space, overhead expense, etc., required for the Springfield, yet it has every good quality of the latter rifle and in addition such features as set triggers, takedown mechanism, etc., hereinafter described.

The entire design of this rifle is so new, and so radically different from anything heretofore produced, that we are devoting considerable space to drawings, in cross section and otherwise, in making clear its construction.

This design is the result of seven years' intensive study of bolt action rifles, with a background of three years' manufacturing experience with the old model Newton rifle, and it embodies improvements over all previous arms in every part. The following are some of the improvements made:

THE COCKING MECHANISM is radically improved. The greatest objection to other bolt action rifles is the tendency to roll the rifle in the hands when turning up the bolt handle to open it. This we avoid by compressing the mainspring by a purely cam movement, when the bolt handle is being turned **DOWN**, in closing the action, thus letting the left hand support the rifle directly against the downward pressure on the bolt handle. As a result the rifle cocks so easily you cannot feel that it has a mainspring, and it can be worked twice as fast as the ordinary type. It may be laid upon the palm of the open hand and cocked and snapped by the tip of a finger, without disturbing its balance.

THE COCKING PIECE is cylindrical, with an eccentric flange near its rear end, and with its front end one half cut away, as shown.

A COCKING BUSHING, with its front end cylindrical and its rear end cut away to lap against the flattened front portion of the cocking piece, lies alongside the latter within the bolt.

A COCKING STUD screwed into the rear end of the cocking bushing projects radially through the cocking cam in the side of the bolt and through a slot in the rear of the extractor, which slot permits the stud to be moved forward and back by the cam as the bolt is turned. This cocking stud holds the cocking bushing, cocking piece and safety against turning with the bolt.

THE FIRING PIN passes through the hole in the front end of the cocking bushing and interlocks with the cocking piece, as shown.

THE MAINSPRING is placed around the firing pin as shown.

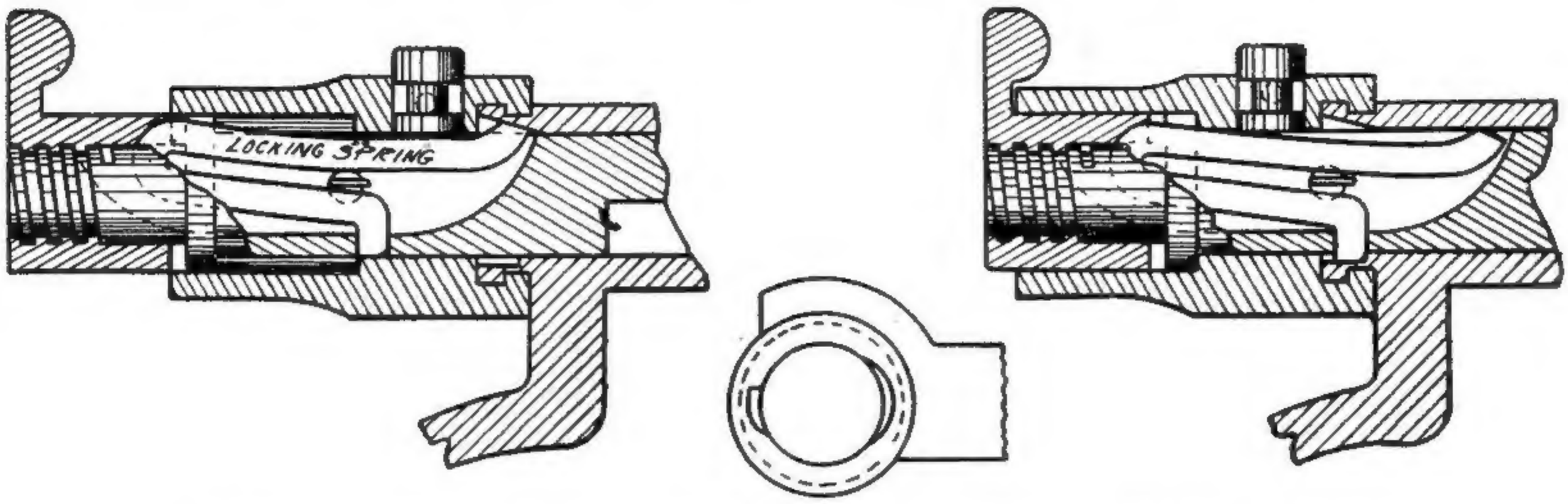
TO OPERATE: The rifle being in the fired position, turn up the bolt handle and the cocking cam in the side of the carrying with it the cocking bushing and all parts inside the bolt, far enough so the sear catches the front face of the eccentric flange on the cocking piece, but without compressing the mainspring. There is no resistance except the loosbolt moves the cocking stud back to the rear end of the cam, ening of the shell in the chamber and the weight of the parts moved. After feeding in the new shell the parts come back to the same position without effort.

As you turn down the bolt handle the cocking cam forces the cocking stud to the forward position, where it catches in front of the shoulder in the cam, carrying with it and holding forward the cocking bushing. But the cocking piece and firing pin cannot go forward with this movement because they are held back by the sear, therefore the mainspring is compressed between the front end of the cocking bushing, which moves forward, and the rear face of the firing pin flange, which is held back by the cocking piece and sear; thus the rifle is "cocked."

Pressing the trigger, thus drawing the sear down from in front of the flange, releases the cocking piece, letting the mainspring extend, throwing forward the firing pin, cocking piece and safety, and firing the rifle.

THE TRIGGER MECHANISM is entirely new, combining the best of single triggers with the best of set triggers. Pressing the rear trigger brings its upper end against the sear, drawing it down and firing the rifle, as shown, the same as any single trigger rifle. But if a delicate pull is desired, press the front, or set, trigger forward with the ball of the thumb, until its rear corner catches below the front corner on the rear trigger, thus compressing the driving spring, where it is held. A very light touch on the rear trigger will then disengage the front trigger, letting its driving spring throw its top forward, striking the sear and firing the rifle. Thus if you don't like a set trigger, just let it alone; it is not in the way at all, or you can take it out and throw it away. The rifle is a perfect single trigger rifle without it; yet, if you want a set trigger you have the best. You have ample finger room, you cannot pull the wrong trigger by mistake, and you do not have to spraddle out the hand to reach a front firing trigger, thus getting the knuckle of the second finger bruised by the rear of the guard loop when the rifle recoils.

OUR LOCKING SPRING, made from ⅛ inch spring steel wire, tempered, performs three functions:



COCKED POSITION REAR END OF BOLT FIRED POSITION

I. AS A BOLT LOCK, it locks the bolt handle down against accidental raising, whenever the rifle is cocked. In this position the left (upper) end rests in a diagonal notch in the rear corner of the bolt, as shown. The locking spring itself lies in a horizontal slot in the cocking piece, which does not turn with the bolt. Thus the bolt cannot be turned when the end of the spring is in this notch. (see drawing "Rear End of Bolt.") But when the rifle is fired this spring moves forward with the cocking piece, its end running out the front end of the notch into the round inside bore of the bolt, where it offers no resistance to turning the bolt to open the rifle. When the rifle is again closed the notch rises up to the end of the spring, which falls into it, and the bolt is again locked down. To open the rifle without firing, press in on the release plunger, which forces the spring inward till it clears the notch. This lock is of great value as it prevents those annoying misfires which happen in hunting when the bolt handle is accidentally raised a little, without the shooter's knowledge, causing the nose of the cocking piece to strike the face of the cocking cam instead of driving straight to its bottom; this prevents the cartridge being fired by the blow.

II. AS A FIRING PIN LOCK, the right (lower) end of the locking spring is turned outward, through a hole in the wall of the cocking piece. When the rifle is cocked this end rests against the inner bore of the sleeve, where it rides freely. When the rifle is fired this end moves forward with the cocking piece, and falls into the recess in the rear end of the bolt in front of the face of the sleeve, as shown. This is so adjusted that when the firing pin is drawn back so its end is just flush with the boltface, the rear of this spring tip rests against the front face of the sleeve, thus prevent- any further backward movement of the cocking piece, and consequently of the firing pin. Thus the point of the firing

pin is made to support the wall of the primer against the back pressure of the gases inside the shell, which flow back through the flash hole, and absolutely prevents all piercing of primers, thus doing away with one of the greatest evils of modern high power cartridges, the weakest part of which is the primer.

The eccentric form of the recess cams the spring tip back into the inside of the bolt as the bolt is turned to unlock it.

III. **AS A SAFETY POPPET**, the rear curve of the locking spring enters a poppet seat in the safety and prevents all looseness and working out of place.

The Locking Spring is fastened into the slot in the cocking piece with a spring cotter, preventing its falling when dismounting the mechanism.

THE SLEEVE is of very simple and symmetrical construction, as may be seen from the drawing. It interlocks with the rear end of the bolt, as shown, and has a central bore of the same size as, and forming a continuation of, that of the bolt. At the rear end it has an eccentric counterbore which admits the eccentric flange on the cocking piece, while the body of the cocking piece passes through the central bore into the bolt. This eccentric counterbore and flange prevent the sleeve turning when the bolt is drawn to the rear ,thus avoiding a fault of the old model Newton.

Being attached to the bolt by interlocking grooves and flanges, the sleeve always fits snugly against the rear end of the bolt, whether the bolt handle be up or down, instead of backing off and leaving an opening between when in one or the other positions, as do sleeves which are screwed into the bolt in the usual way. This excludes dust, water, snow, etc.

THE SAFETY is of very simple construction. Its body is of exactly the same size and form as the flange on the cocking piece, and a spindle hole is eccentrically placed to receive the safety spindle on the rear of the cocking piece. It is hung much lower, thus is much more convenient to reach, than the ordinary safety.

When the safety is in firing position its body is lined up with the flange on the cocking piece and with the counterbore in the sleeve and held there by the safety poppet, its front end being at the rear end of the sleeve. When the rifle is fired the body of the safety enters the counterbore of the sleeve with the cocking piece, without resistance.

To make the rifle "safe" turn up the safety lever, thus turning the safety on its spindle, and the thicker portion of its eccentric body swings out behind the rear end of the sleeve, as shown in the drawing, thus blocking any forward

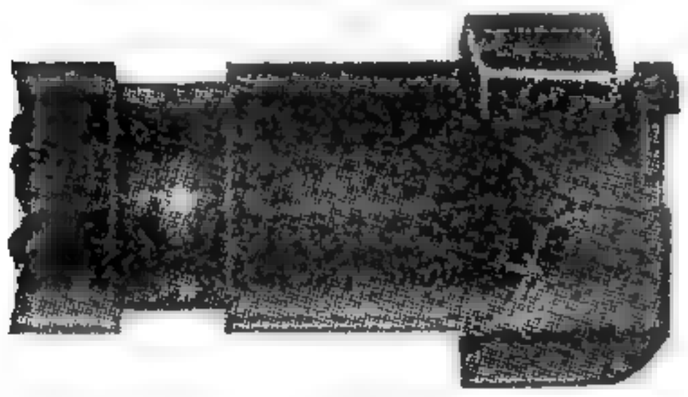
movement of either safety, cocking piece or firing pin, and preventing firing the rifle. The threaded -engagement between the safety and the cocking piece cams back the cock-piece clear of the sear. To make the rifle ready to fire, turn the safety lever back to the firing position, thus bringing its body again in line with the counterbore in the rear of the sleeve and it will again enter.

The safety is absolutely silent in operation.

THE SAFETY POPPET SEAT is so formed that while but little force is required to put the safety on, yet the shoulder on the other side is so abrupt it is impossible to push the safety past the firing position in throwing it off. It can be unscrewed off only after the cocking piece has been removed from the bolt and sleeve, which lets the front end of the locking spring swing out enough so its rear curve clears the shoulder of the poppet seat.

OUR LOCKING SYSTEM is the strongest ever put on a rifle. Instead of two solid lugs we use an interrupted screw, with double buttress threads, on a pitch of four turns to the inch, as shown in the cut. These threads form the cam which seats the shell in the chamber, and which starts the fired shell from the chamber, thus givng enormously more power for this work than any other rifle. On the question of strength, the accompanying illustration shows a Springfield bolt, which has "let go." All which break, do so in the same way.

It will be noted that the lugs did not break—it was the body of the bolt which gave way, as the lines of fracture show. Strengthening those lugs would be useless; you must strengthen the bolt itself.



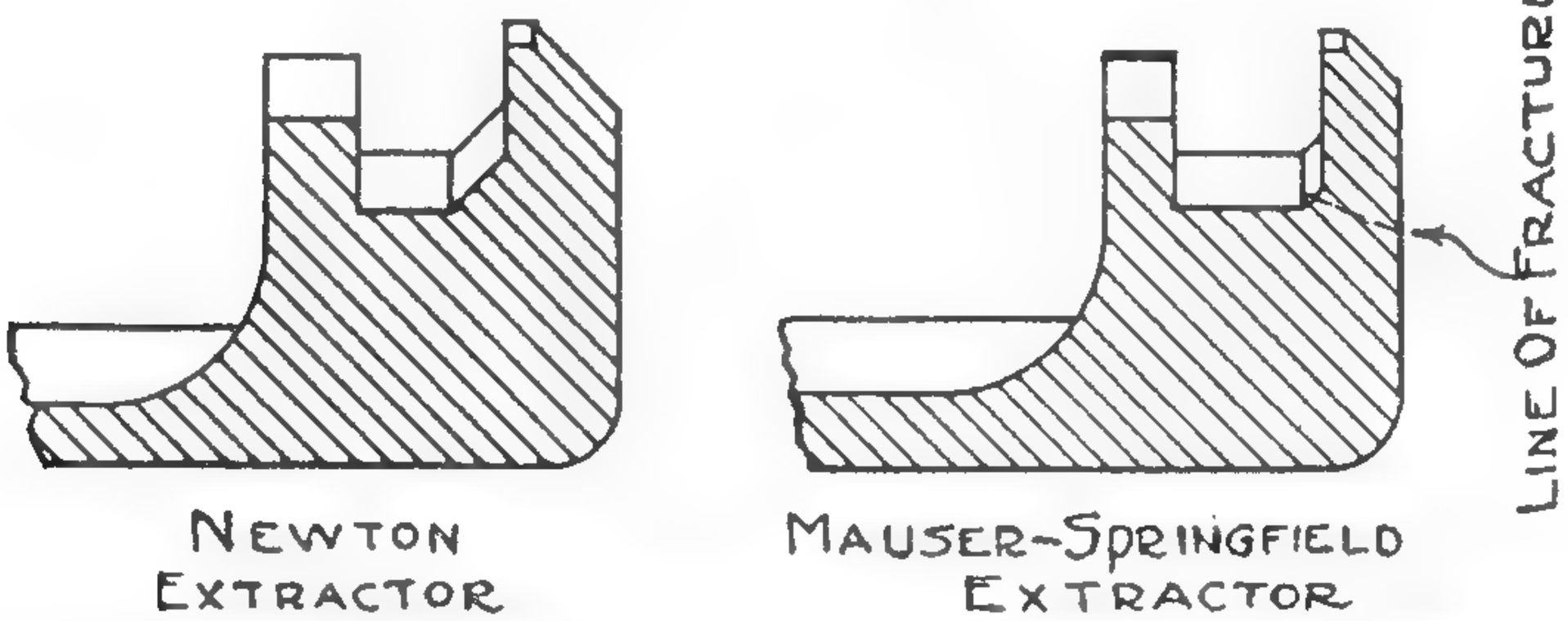
With our system we so distribute the strain that to break the bolt you must make just as many such fractures as there are locking lugs. We have fourteen locking lugs instead of their two; count them. Therefore our bolt will stand seven times as much pressure as will any two-lug bolt, regardless of how strong the lugs are.

OUR MAGAZINE BOX forms the complete magazine, including the lips which hold the shell and guide it on its way into the chamber. It is made from sheet steel, stamped and formed in a punch press, and has the necessary flexibility to guide the cartridge into the chamber so perfectly and easily that the point of the bullet touches the rifle only as it starts to ride up the slope to the chamber. This is a great

improvement over those rifles which depend for guidance of the cartridge upon forms milled on the receiver, which are absolutely rigid, and which guide the cartridge by kicking it one way and cuffing it another before it is entered into the chamber. That method suffices with full metal cased bullets, but those with soft points are deformed by it.

OUR MAGAZINE SPRING SYSTEM is a great improvement over any other. By our use of two independent springs we are able to obtain exactly the right relation of pressure between the front and rear ends of the follower to secure perfect feeding, while the magazine bar, mounted on two pins, absolutely prevents any side tipping of the follower—a prolific cause of jamming. Further, our springs, being of piano wire, will never break,—and all flat springs are likely to break.

OUR EXTRACTOR, while on the same principle employed in the Mauser and Springfield, is very much strengthened. The cuts show cross sections of the two, through their centers. The arrow indicates the line where the old type break, and the only place any can break. Compare the strength of the two and see which you would rather take into the mountains without a spare part for replacement.



NEWTON EXTRACTOR

MAUSER-SPRINGFIELD EXTRACTOR

We use no extractor collar, but hold the extractor against the bolt by leaving a fin of steel on the receiver standing ⅛ inch above the bottom of the right lug race along the magazine opening. The back of the extractor bears against this and is thus held up to its work as firmly as by an extractor collar, without the complications of the latter.

OUR TAKEDOWN MECHANISM is the same as in the old model Newton. Its salient feature is that **the barrel does not unscrew from the receiver**; thus the rifle, when assembled, is just as strong and accurate as a rifle which does not take down.

To take it down, press in the floor plate catch, thus letting

the floor plate swing down. The floor plate is hinged in the front takedown bushing, and, using it as a lever, you unscrew the bushing off the lower end of the front receiver screw, thus freeing the front end of the action. Then raise the muzzle from the stock, and the barrel, with receiver attached, tips up off the stock, unhooking at the rear end of the receiver. To assemble, replace the rear end of receiver under the head of the rear lock, lower the barrel into place, screw the front takedown bushing upon the lower end of the front receiver screw, and snap home the floor plate.

To adjust, or to take up wear at the front end, the front receiver screw has a finer pitch of thread where it screws into the receiver than where the front takedown bushing screws upon it; a set screw prevents it from turning in the receiver. By loosening this set screw and turning the receiver screw either out or in, as may be required, you gain or lose just the difference between the pitches of the threads on the two ends of the screw. To take up wear at the rear end, remove the rear lock and grind or file the required amount from its lower end, which will draw the head lower.

OUR BOLT STOP is well illustrated by the drawings. It is mounted in a hole in the bottom of the receiver, and takes up the hammer blow of stopping the bolt on its backward stroke directly upon the walls of the receiver forging instead of upon a cross pin, as was the case with the old model Newton and those copied from that. We have no cross pin to shear off. It is held up against the lower side of the bolt by the rearwardly projecting limbs of the sear spring, and its upward throw limited by a narrow flange around the bottom. To withdraw the bolt completely from the rifle, press the trigger, thus drawing down the sear and swinging its lower part forward. On its front edge is a little shoulder which swings above the flange on the bolt stop and prevents its rising up to interfere with withdrawing the bolt, as shown.

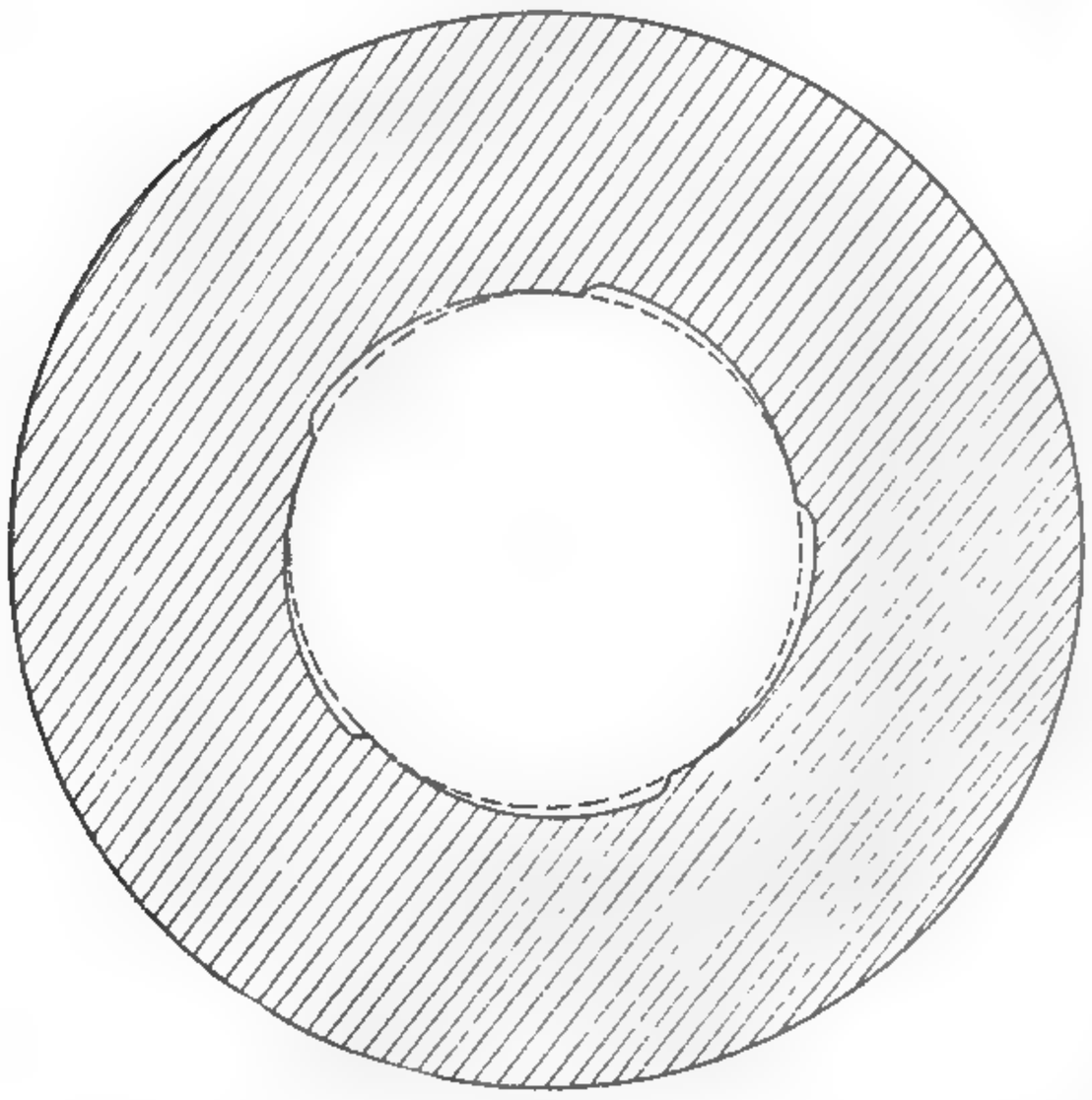
OUR EJECTOR is the essence of simplicity, as the drawings show. Mounted in the front end of the bolt, it does away with mutilating or complicating the receiver to attach it. When the bolt is drawn to the rear the face of the boltstop strikes the head of the ejector, stopping its backward movement ⅛ inch before the bolt is stopped, thus protruding the front end of the ejector against the head of the backward moving shell, throwing it clear of the rifle. As the bolt moves forward again the ejector spring retracts it within the body of the bolt, leaving the boltface clear for the next cartridge to feed up.

OUR FIRING PIN is so constructed that it cannot be

put in wrong or adjusted wrong. Much trouble was experienced by users of the old model Newton rifle who took them apart and in putting them together screwed the firing pin nut on too far. The rifles would thus miss fire because the firing pin did not protrude far enough through the bolt face. They are still writing in to be told to unscrew it one turn. Our firing pin simply CANNOT be put in wrong. In fact, the rifle is "FOOL PROOF," as there is not a single part which CAN be put in wrong. If you get the rifle together, and get all the parts in, you may depend upon their being right.

OUR BARRELS are on the same outline as the Springfield barrels, combining lightness of weight with sufficient rigidity for accurate shooting, in the highest degree. The U. S. Ordnance department, when designing the Springfield, spent much time and money in determining, inch by of barrel length, just how light they could, and how heavy they must, make the barrel to give the best results. They wanted for the soldier the lightest weight consistent with accurate shooting,—which is just what the sportsman wants. Therefore we took advantage of their experience in this respect and adopted their measurements.

However, we departed from their practice in mounting the front sight, placing ours on a solid lug milled on the top of the barrel instead of pinning a clumsy sight band upon it.



THE TWIST of the rifling for the .256 Newton cartridge has been changed from one turn in 10 inches to one turn in eight inches, thus permitting the use of 140 grain bullets in this rifle. The 10 inch twist, of the old model rifles, was not quite quick enough to give the best of accuracy with the 140 grain bullet, so we have corrected it.

OUR RIFLING is on the principle of the segmental rifling which was so popular in the old Newton rifles. Instead of making a groove in the form of a segment of a circle, we make it in the form of a parabola, with the shorter radius at the driving edge of the land, thus giving a better grip on the bullet, but without impairing in any way the

ease of cleaning for which the segmental type was famous. The segmental type proved more accurate than the ordinary groove, while the parabolic grooves prove more accurate than the segmental. The design is shown in the cut.

THE FIT OF OUR BULLETS in the bore of the barrel is slightly tighter than that of the Springfield barrel and bullet.

We have many inquiries as to the bore and groove diameter of our barrels and the maximum diameter of our bullets; these from men who wish to judge from those dimensions of the tightness of the fit of the bullet. Conclusions which would be drawn from those figures alone might be very misleading, as they do not take into account the FORM of the groove itself. In fact Maj. Townsend Whelen published a book wherein he condemned the old model Newton rifle, with its segmental rifling, as being too loose a fit for the bullet BECAUSE the bullet diameter was but .264 inch, while the maximum diameter across the grooves was .268 inch. He did not stop to consider that with the segmental groove, as with our present parabolic groove, the maximum diameter is reached at only a single point, tapering from there to nothing at the edges, whereas with the ordinary rifling the groove is of maximum depth for its entire width, with straight sides. Thus in cutting the ordinary groove but .004 inch deep more metal is removed than in cutting the segmental or parabolic grooves .006 inch deep. The smoothbore size being the same, the more metal removed in cutting the grooves the larger will be the resulting bore and th looser the bullet fit. Thus the segmental rifling of the old model Newton, when cut .006 inch deep left an opening through the barrel equal in size to a round hole just .260 inch in diameter, which is .004 inch less than the diameter of the bullet, making it an exceptionally tight fit instead of the exceptionally loose one ascribed to it by Maj. Whelen. He admitted this frankly when his attention was called to the effect of the form of the grooves on the fit of the bullet, but the statement in his book cannot be changed until the next edition comes out. When the bullet is forced into the rifling the resistance of the lands throws the metal of the bullet aside into the grooves, and it bulges outward as far as the walls of the groove will permit, thus making a gas tight fit at every point, decidedly tighter than can be had with a Springfield barrel and bullet.

OUR CHAMBERS are made as tight as possible and still use commercially made ammunition. Ten years or more ago Mr. Newton published a magazine article discussing the fit of chambers of rifles, and cited some good results obtained from an experimental barrel with a comparatively

loosely fitting chamber neck, but did not give full credit to the fact that he was using shells which had been repeatedly fired in the same chamber and were thus a perfect fit throughout the body. Since that time there has been an impression that he **ADVOCATED** the use of loosely fitting chamber necks. That impression is incorrect. We believe, and we carry our belief into practice, that the chamber should be as close a fit as will use commercial ammunition, and we make ours that way. We follow the Springfield tolerances here exactly.

THE OIL FINISH on our stocks is worthy of description.

The best oil finish which has been in use, and for which one has had to pay from $10.00 upward extra, consists of repeatedly soaking the stock in oil and rubbing it down until the outer fibers of the wood are saturated to an infinitesimal depth with the oil. This is a long and expensive process, and because of its length and expense no American factory puts out a standard gun or rifle with anything but a varnish finish, except in some of the cheaper grades where a single dipping in oil is made to serve. The oil finish we furnish is far superior to any other and actually costs far less than the cheap varnish finish usually used. The process is interesting:

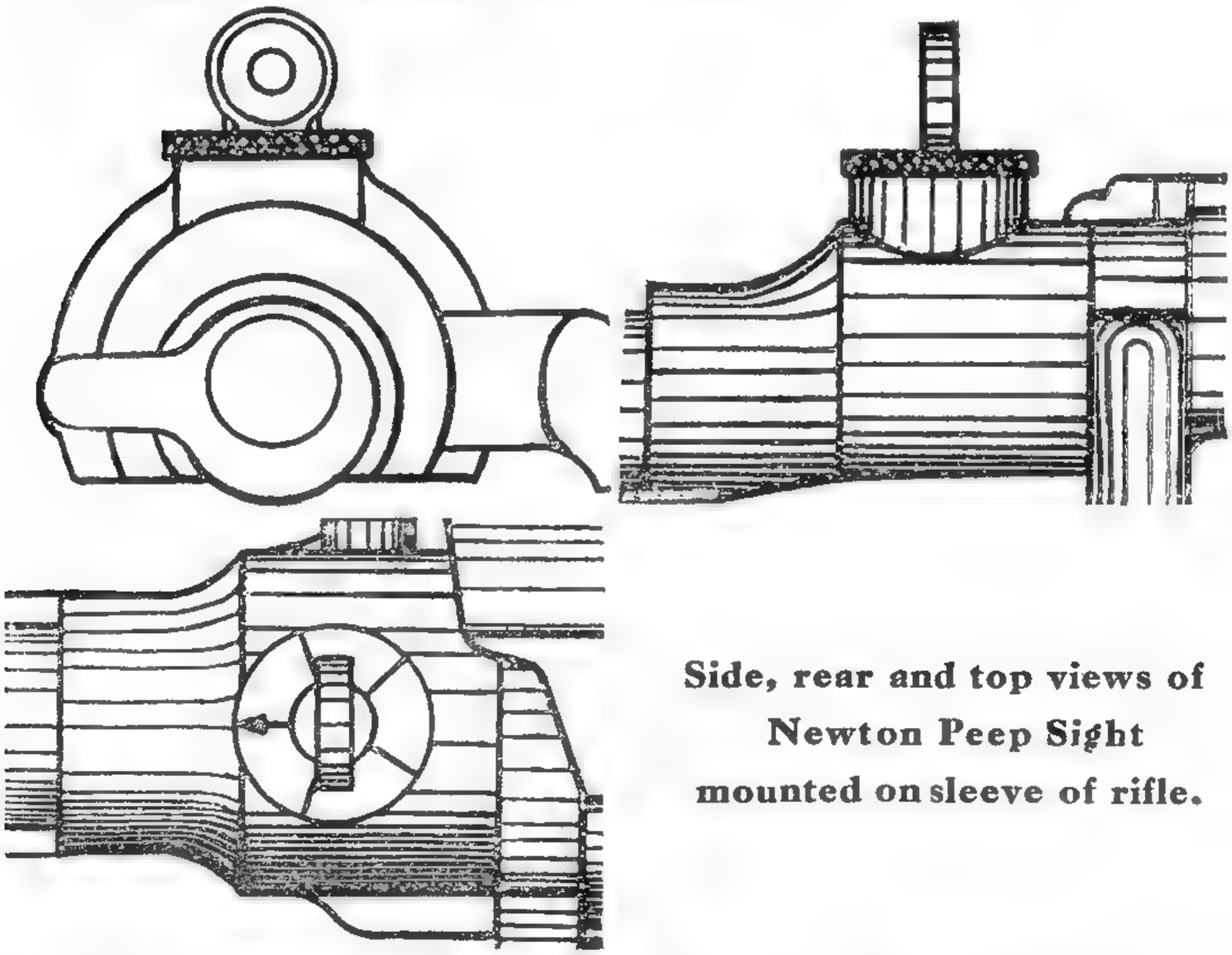
An oil tank, with a coil of steam pipe at the bottom for heating the contents, large enough to take a wire cage holding a full day's output of stocks when the factory is running at full capacity, and fitted with an air tight cover, is filled to the proper height to completely submerge all the stocks with oil. The cover is fastened on, and with an air pump connected to the upper portion of the tank, the air is pumped out until the space in the tank above the oil is a vacuum. The air in the pores of the wood expands, rises to the top of the oil, and is pumped off, so the pores are also vacuums.

The air is then admitted at the top, and as it cannot reach the wood, which is covered with oil, the pores suck in the oil instead, or rather the air pressure forces it into the pores. The pump may then be reversed and an air pressure pumped upon the top of the oil to help force it into the wood.

As a result the wood is completely saturated with oil just as deep as you wish, it being possible to throw it completely to the center. But this would make the stock too heavy, so we throw it in only 1/16 inch below the surface. Your stock then has a skin, 1/16th inch thick, of oil saturated wood all over its surface—better than you could get if a man worked an entire lifetime on a single stock in the old way.

After the oil has been thrown in to the proper depth the cage of stocks is hoisted up above the tank and left to drain and dry for 24 hours, when the stocks are given a rubbing down, and you have a real oil finish, not a dip or a wash

OUR PEEP SIGHTS are the essence of simplicity. The drawings show the general appearance. The sleeve, in which they are mounted, has at the bottom two flanges which rest upon the bottoms of the lug races. Into these flanges are placed two vertical headless screws. By adjusting these screws the sleeve is made to ride absolutely rigid, thus furnishing a solid sight base which cannot be swayed from side to side. The body of the sight contains an elevating nut, the flange of which is knurled and overhangs slightly the body. This nut has right hand threads on its outside, which engage similar threads inside the body, while inside the nut has left hand threads which engage similar threads on the edges of the sight stem. Guide fingers prevent the stem turning as the elevating nut is turned.



Side, rear and top views of Newton Peep Sight mounted on sleeve of rifle.

When the elevating nut is turned to give elevation, its inner threads raise the sight stem in the nut, while its outer threads raise the nut itself in the body, giving double elevation movement in which the nut rises one-half as far as the stem, thus giving elevation sufficient for shooting at 900 yards, yet with absolute rigidity of the stem.

THE SIGHT STEM will not break off below the aperture, since it has at its weakest point a width of 9/32 inch and

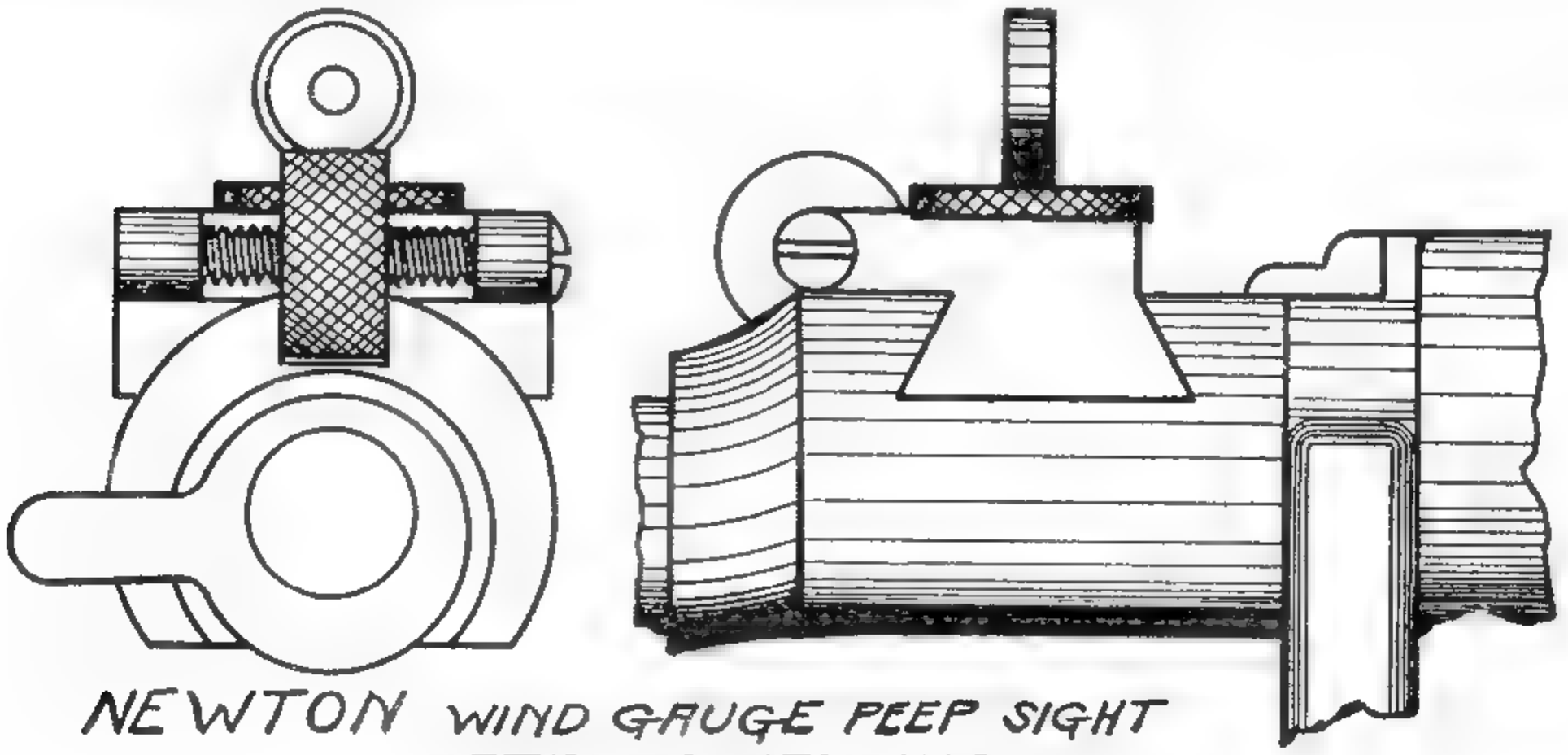
a thickness of ⅛ inch and is made of the best chrome vanadium steel; you cannot hammer it off. Compare this amount of metal with that found in other peep sight stems just below the aperture.

THE SIGHT DISK is ⅜ inch diameter outside, with 3/32 inch hole. This makes the disk large enough to be seen distinctly in a weak light, while the aperture is large enough to admit sufficient light to sight clearly when it is so dark that even the coarsest of open sights are useless. It is a happy medium between the old type which had a disk too large and a hole too small, and the later type in which the disk is too small and the hole too large.

A new sleeve is furnished as part of every sight, so all that is necessary to mount the sight on your rifle is to dismount the bolt far enough to remove the sleeve, and put the new sleeve, carrying the peep sight, in its place. Then adjust the dummy screws in the bottom of the sleeve and your sight is mounted complete. The original sleeve may be replaced at any time, the change being made without tools and in less than a minute.

To zero the sight for elevation, turn the elevating nut upward until the bottom of the stem clears the tops of the guide fingers; screw the stem up or down in the elevating nut as far as may be required, then screw the nut down until the flange on its upper end stops against the top of the body, and you have your point blank adjustment. The sight stem may be given a half turn, if no more adjustment is desired. One half turn adjusts it 1¼ minutes of angle, changing the point of impact 1¼ inches for each 100 yards of range.

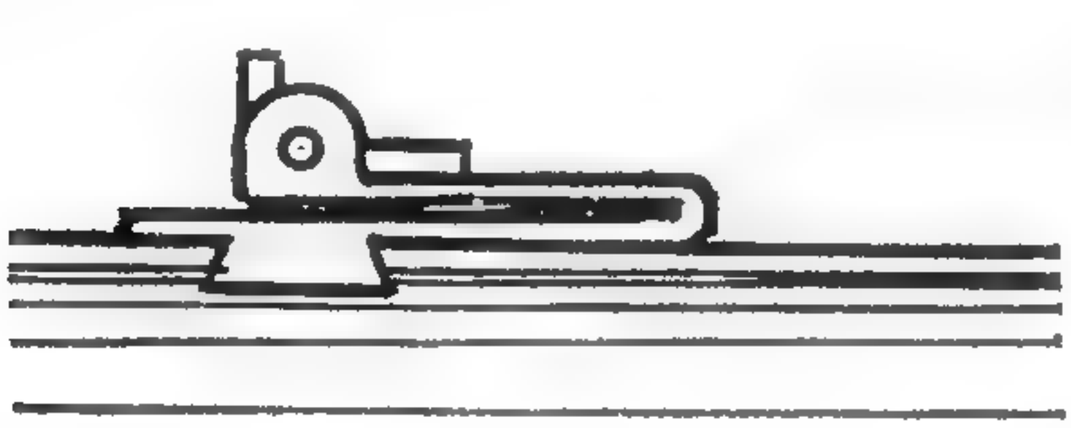
This sight is provided with a click which indicates minutes of angle of elevation, each minute being equal to one inch of elevation for each 100 yards range. There are five clicks for each revolution of the elevating nut.

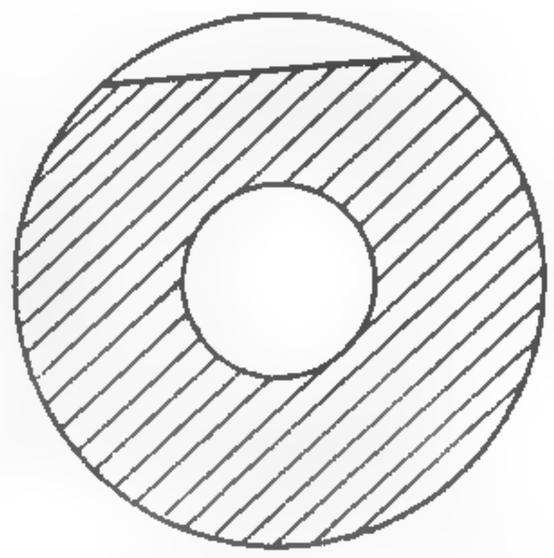


NEWTON WIND GAUGE PEEP SIGHT
PATENTS PENDING

OUR WINDGAUGE PEEP SIGHT is based upon the same principles as the sporting model the elevating sleeve and other interior mechanism being the same. The cylindrical portion of the sleeve is carried farther to the rear and instead of a round body screwed into the sleeve we have a block mounted in a dovetail slot, with the elevating nut, etc. screwed directly into the block. The block slides endwise in the slot, and is moved in either direction by a fixed traversing screw, with a round nut engaging its center. The edge of this nut runs in a groove in the sleeve, so the nut is always opposite the center of the sleeve. Turning the nut forces the traversing screw endwise and this carries the block with the sight stem and elevating mechanism with it. This sight has the same clicks and elevating movement as the sporting model.

OUR STANDARD REAR SIGHT is shown by the cut. It is made from spring steel, and the head rotates one quarter revolution. The head has two leaves, at right angles to each other, one being 3/32 inch higher than the other. Both have a straight top with U notch.





The rifle is sighted for point blank with the lower leaf, the higher leaf folding forward. To elevate the sight, draw back on the lower leaf until it is horizontal, and the higher leaf will then be upright for use. Push forward the higher leaf and the lower comes up for use.

The leaves are held in position by the downward pressure of the spring. The bottoms, opposite the leaves, are flat and when the leaf is erect the bottom rests upon the top of a headless screw, not visible, inserted in the sight block. To adjust the sight for zero this screw is raised or lowered, the head being removed for the purpose. Once adjusted it is not moved again, and it is where it cannot be tampered with by well-meaning friends who like to turn things.

OUR REAR SIGHT violates one of the dicta of the magazine experts in that it is slotted directly into the barrel instead of being mounted on a sight band. The cut shows a cross section of a barrel at that point, with a .35 calibre bore,

the largest made, and it will be readily seen that the slot CANNOT in any way impair the shooting qualities of the barrel, it being but three inches in front of the receiver. Compare it with the barrels of other American rifles which have given good service, and which were much lighter and slotted as deeply. This construction is adopted for the reason that it gives more room for the elevating mechanism of the sight without raising the sight line unnecessarily high above the center of the bore. If the bottom of the sight mechanism is to be raised to the top of the barrel the sight line goes up also. Further, there are no sight bands to break or get loose. Therefore, unless a sight band is a matter of religion only, our construction is just as good in every way and much better in allowing a lower sight line.

OUR FRONT SIGHT is a 1/16 inch gold bead. Hold the top of bead level with top of leaf for point blank, the center of bead opposite top of leaf for 1/32 inch elevation and the bottom of bead opposite top of leaf for 1/16 inch elevation. For 3/32 inch elevation, turn up the second leaf and use as before. This gives six different elevations, with only one change of sight—and you cannot forget to put your sight back down except on one of them.

OUR "BULL STRONG" STOCK, is a great improvement over any other ever built, and this is very important when using cartridges of considerable power, as with the .30 Newton and .35 Newton. The accompanying cut, together with the cross section on page 1, shows the construction.

All rifles, when fired, receive the impulse of the recoil first on the barrel, from which it is transferred to the receiver and from there to the stock. It meets the resistance of the shoulder at the butt of the stock. Therefore it is important that the stock, at the point where it receives the thrust of the recoil from the receiver, and from there back to the buttplate, be strong enough to take the blow without being in any way strained by it; otherwise the stock will eventually split. This happened, to some extent with the old model Newton rifle when using the .30 Newton and .35 Newton cartridges, as it was built in that respect on the same lines as the Mauser and the Springfield, so we have changed the design somewhat to obviate this difficulty.

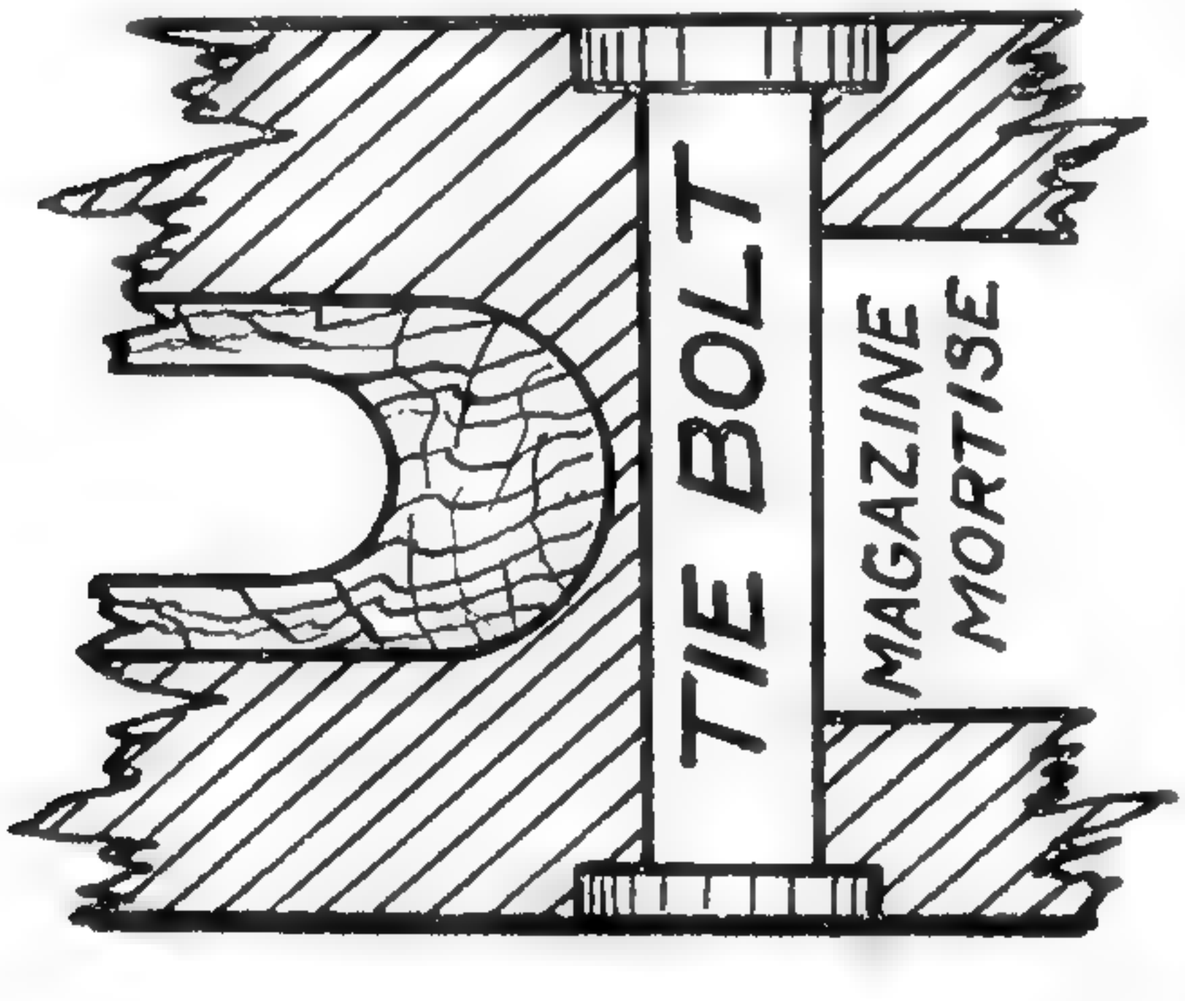
All bolt action rifles heretofore made have a recoil shoulder on the bottom of the receiver, near the front end, which engages the rear face of a mortise about 1¼, inches in front of the magazine mortise, and it is here that the thrust of the recoil is transferred from the receiver to the stock.

The weakest part of the stock, in resisting this strain, is opposite the magazine mortise, where the sides are com-

paratively thin and are unsupported for the entire length of the magazine. If the force of the recoil be sufficient, these sides of the stock tend to buckle outward under the back pressure. This tends first to split the stock between the rear of the magazine mortise and the front of the trigger mortise. After this wall is split the buckling becomes more extensive, as there are no cross ties between the front of the magazine and the rear of the trigger mortise and the unsupported portion of the side walls is doubled in length. The stock then begins to split in front of the magazine and to the rear of the trigger mortise and is soon ruined. As a partial preventive the Springfield rifle has a round tie bolt 3-16 inch diameter, across between the magazine mortise and trigger mortise, which affords some additional strength.

We go to the root of the trouble, and instead of forcing the stock to take the recoil thrust in front of its weak point, our design takes the thrust to the rear of it, and where the stock is strongest.

The front recoil shoulder is omitted entirely. We mill a groove across the lower side of the receiver, which lets the rear wall of the magazine, which is a part of the guard, enter 1/8 inch up into the receiver. Immediately back of the upper part of the rear wall of the magazine is a tiebolt 5/16 inch square, with a 7/16 circular nut countersunk at each end, passing across the stock.



The thrust of the recoil is transmitted by the receiver directly to the upper part of the rear wall of the magazine and from it to the tiebolt across the stock which transmits it to the stock itself. The stock is thickest and heaviest here, it is solid but for the 1/2 inch wide trigger mortise, and both the rear face of the tiebolt and the rear edges of the nuts bear against the ends of the grain of the wood, while the nuts prevent any spreading of the wood. Thus, there being no weak point between the point where the stock receives the thrust and the buttplate, the use of the heaviest charges indefinitely can never strain or injure the stock. The thrust is carried wholly by steel until it reaches the rear face of the tiebolt.

COMPARISON WITH OLD MODEL NEWTON:

The old model Newton rifles became so well known, and the workmanship on the rifles varied so much through the vicissitudes of wartime production and the receivership of the old firm, that many are curious to know to what extent we have changed the rifle in some of the points which impressed themselves on the individual users; hence we mention the effect of some of these changes.

Bolt wabbling when drawn to the rear: Cause, counterboring the rear end of the receiver for enlarged rear end of bolt, thus shortening the bearing of the bolt to ⅞ inch. Remedied by omitting the counterbore, leaving a bearing in the receiver of 2¾ inches.

Jamming, and failing to feed cartridges properly: Cause, lack of proper relief of lower corner of extractor, and improper setting of magazine spring. Remedied by properly shaping extractor and new type of magazine spring.

Sleeve turning when bolt was drawn back: Cause, no positive lock against turning. Remedied by a positive lock.

Misfiring: Cause, usually screwing firing pin nut on too far; sometimes poor war time made primers. Remedied by using firing pin which cannot be put in wrong, and using good primers.

Rifle would not stay cocked: Cause, rifles put out by receiver of old company did not have parts hardened and they wore. Remedied by hardening parts.

Bolt handle becoming locked down: Cause ,depending upon a spring to withdraw bolt lock; no positive unlocking movement. Remedied by new construction which unlocks it automatically and positively when rifle is fired, with positive release plunger to unlock without firing.

Bolt pulling out backward, and difficulty in releasing bolt: Cause, sear pin working back, thus loosening sear, which controlled bolt stop. Remedy, construction which prevents sear pin working out.

Shearing bolt stop pin: Cause, hammer blow of checking bolt on backward stroke taken up on a cross pin. Remedy, taking blow directly on wall of receiver.

Splitting of necks of shells: Cause, use of inferior war time made brass and lack of knowledge of cartridge factory as to how to properly treat shells made from such materials when reducing them. Remedy, good materials, and annealing the necks of shells during reducing process. This fault was and is wholly one of the ammunition used.

During the past three years we have received all mail addressed to the old company, thus having heard from many users of the 4000 old model rifles now out, including all kicks. We have noted and avoided the causes of all these in our new model. The greater portion of the trouble was with the 1600 of the rifles put out by the receiver, who ran the plant after Mr. Newton was out of it, and was due to the poor workmanship which he permitted, and to lack of understanding on his part of their mechanism and manufacture. Some came from users who did not understand the mechanism of their rifles, yet took them apart and did not get them together right. We have carefully eliminated every point in which a part CAN be put in wrong, and if parts are left out, but enough is put together to make it possible to fire the rifle, it is entirely safe and will shoot correctly.

OUR RIFLE CANNOT BE FIRED UNLESS IT IS COMPLETELY LOCKED. Many have been misled by the fact that the Ross rifle, a high power type, sometimes lets the bolt blow back in the shooter's face, into thinking that all high power rifles are thus temperamental. This is an error. The Ross bolt blows back only when the locking lugs are not turned to engage the locking shoulders; the lugs never break. In that rifle the bolt does not turn, but the locking head turns in the front end of the bolt, out of sight, so you cannot see if it is turned. The construction is such that it may be fired in that position. Our rifle, as well as the Springfield, Mauser and all other bolt action rifles in which the bolt itself turns to lock, cannot possibly be fired unless the bolt is fully locked, as it is only when in that position that the firing pin can reach the primer at all.

AS TO QUALITY

As to how straight and how hard the Newton rifle will shoot, how well it will kill, and the ballistic properties of both rifles and cartridges, we freely refer to the record made by about 4000 of the old model rifles during the past two years. "Ask the man who owns one." He will also tell you how easy or otherwise it may be to keep clean the new type of rifling.

THE RECOIL OF OUR RIFLES is very light in comparison to the power of the blow struck by the bullet, far lighter than in any other rifle. Naturally when you fire a cartridge having power of a .450 cordite elephant rifle which weighs fifteen pounds, from a rifle weighing but 8¼ lbs., you must expect some recoil, but it can be fired with comfort if you are familiar with holding it.

We are frequently asked what is the recoil in "foot pounds" of our different cartridges . We do not know and do not care, as "foot pounds" in connection with what you get on the shoulder in firing the rifle, is an absolutely meaningless term; it in no way expresses the sensation, since it deals only with **energy** of recoil, while the sensation comes from **velocity** of recoil. As an instance, a slowly moving canal boat has many thousand foot pounds of energy, but little velocity; let it strike the shoulder and it will force the shoulder back, out of its way, but without giving any pain. Yet a tackhammer, swiftly swung against the shoulder delivers but a fraction of a foot pound of energy, but gives excruciating pain and bruises deeply. What you want to know is **how they feel** in comparison with guns you are familiar with. Here it is:—

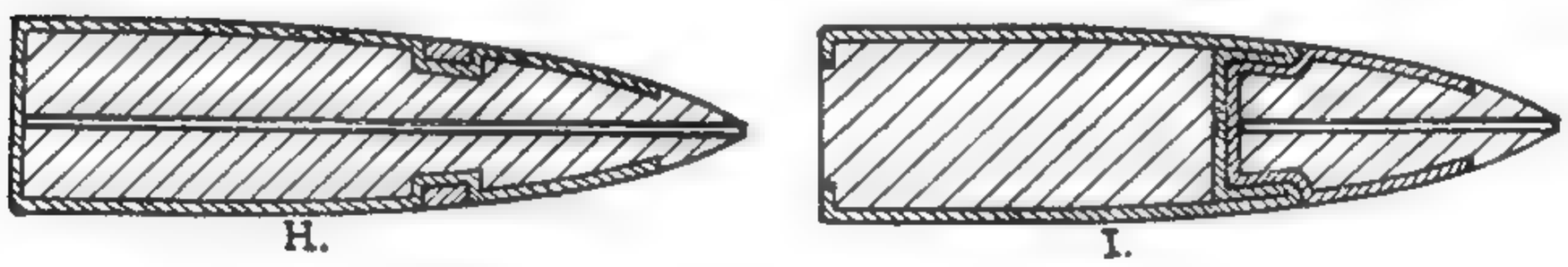
Our .256 Newton has about the recoil of a .30-30 rifle.

Our .280 Newton has about the recoil of the .30 Springfield military cartridge, with 150 grain bullet, fired from the military rifle.

Our .30 Newton has a little, but not much, more recoil than the Springfield sporting model with 180 grain bullet at 2600 f. s.; It is much like the .35 Winchester, model 1895, or a 12 gauge shotgun fired at a stationary mark.

Our .35 Newton has about the recoil of a .405 Winchester, model 1895.

THE NEWTON "BEARCAT" BULLETS
(Patented)



H. I.

These bullets were designed to enable users of ultra high velocity rifles to realize the full advantages of those arms.

When we fire on big game we may strike where the tissues are soft, and the bullet must mushroom freely, or where the tissues are thick and hard, and deep penetration is required. **When we place the cartridge in the chamber we do not know which condition it will be required to meet, therefore, we have designed bullets which will serve equally well in both cases—our "bearcat" designs, two of which are shown above.**

The basic principle of these bullets is that they mushroom freely to a certain limit, after which further mushrooming

stops, and the bullet, with its enlarged jagged point, continues penetration until brought to rest—still a bullet, not a handful of lead fragments.

These bullets enable the man who has always avoided the higher velocities and stuck to his .30 U. S. G. model 1903, with its 220 grain bullet, because he knew he could depend upon its penetration, to avail himself of the flat trajectory and enormous power of the modern type, without being required to gamble on whether or not the bullet will penetrate sufficiently deeply to stop the game. He may use the high velocities and still have the effect of bullets instead of shrapnel with an impact fuse.

To protect the cores of these bullets against being melted by the heat from the friction against the bore, we use double thick jackets, which not only accomplish this purpose as well as did the paper insulation of the old Newton type, but also make the bullet itself much more rigid and consequently more accurate.

THE NEWTON CARTRIDGES

Are now well known to the up-to-date sportsmen. They are distinguished as having the highest muzzle velocity, coupled with good bullet weight, therefore, whatever the caliber chosen, they are far more powerful and of far flatter trajectory than any other cartridges known.

There is a wide spread impression that we get our superior velocities by the use of abnormally high pressures. This is not the case. The pressures developed by our cartridges are no higher than those of the Ross .280 and below the average of the modern sporting and target loads for the Springfield cartridge. We load to 54000 pounds per square inch, while the Springfield loads run up to 60,000, and the military load first worked out was 50,000 pounds.

These cartridges, while of the utmost possible power, yet are universal in their adaptability to all purposes by proper loading, thus making any rifle using them the long sought for "all around rifle."

While the normal muzzle velocity is about 3000 feet per second, yet they may be loaded with reduced loads to give results obtained with the 2000 ft. sec. class, or still lighter, down to 900 to 1000 f.s., where they have the power of the 32-20 or of revolver bullets, yet have the most extreme accuracy. Thus a man armed with a .35 Newton rifle may shoot a rabbit or grouse through the body without mutilating the carcass, yet a stroke of the bolt places at his disposal a bullet which will drop an elephant.

TABLE OF BALLISTICS

		.250 Savage 87 gr. C-.276	.256 Newton 129 gr. C-.464	.256 Newton 140 gr. C-.528	.280 Newton 160 gr. C-.503	.280 Ross 145 gr. C-.457	.30 U. S. G. 150 gr. C-.389	.30 U. S. G. 180 gr. C-.513	30 Newton 180 gr. C-.513	.35 Newton 250 gr. C-.40	.35 Whelen 250 Gr. Rd. C-.287	.35 Whelen 250 Gr Pld. C-.40	.40 Whelen 300 Gr. C-.258	.405-300 W. C. F. C-.258	450 Cordie 480 gr. C-.384
Muzzle	Velocity, ft. lbs....	3000	2964	2920	3000	3050	2700	2600	3000	2975	2635	2635	2425	2204	2150
	Energy, ft. lbs.....	1740	2528	2660	3200	3002	2445	2700	3600	4925	3850	3850	3930	3236	4944
100 Yds.	Velocity, ft. sec....	2657	2758	2729	2809	2837	2465	2428	2812	2737	2331	2415	2102	1897	1944
	Energy, ft. lbs.	1375	2193	2310	2816	2595	2034	2376	3168	4175	3025	3250	2940	2399	4032
	Trajectory, ft.	.045	.044	.055	.043	.042	.055	.058	.043	.044	.057	.046	.071	.086	.086
	Time, Flt., sec....	.106	.105	.117	.104	.102	.116	.120	.104	.105	.121	.118	.133	.147	.147
200 Yds.	Velocity, ft. sec....	2340	2562	2552	2625	2635	2244	2263	2632	2512	2045	2204	1804	1623	1752
	Energy, ft. lbs.	1061	1883	2030	2464	2247	1686	2052	2772	3500	2325	2700	2160	1740	3264
	Trajectory, ft.	.204	.191	.213	.183	.180	.241	.244	.183	.192	.266	.248	.329	.404	.38
	Time, Flt., sec.....	.226	.219	.231	.214	.212	.243	.247	.214	.219	.258	.249	.287	.318	.31
300 Yds.	Velocity, ft. sec....	2042	2375	2387	2450	2441	2039	2130	2460	2297	1781	2003	1541	1384	1576
	Energy, ft. lbs.....	783	1625	1778	2144	1929	1392	1818	2430	2950	1750	2250	1590	1290	2640
	Trajectory, ft.	.530	.460	.496	.441	.436	.596	.521	.438	.473	.692	.615	.872	1.07	.96
	Time, Flt., sec.....	.364	.339	.352	.332	.330	.384	.361	.331	.344	.416	.392	.467	.518	.49
500 Yds.	Velocity, ft. sec....	1526	2046	2073	2117	2076	1668	1828	2130	1896	1341	1640	1152	1078	1280
	Energy, ft. lbs.	435	1213	1344	1600	1392	932	1314	1818	2000	1000	1500	900	780	1728
	Trajectory, ft.	1.98	1.39	1.54	1.42	1.42	2.04	1.77	1.41	1.59	2.59	2.07	3.38	4.16	3.31
	Time, Flt., sec. ...	.704	.591	.622	.595	.597	.709	.665	.595	.632	.806	.723	.922	1.02	.91
1000 Yds.	Velocity, ft. sec...	920	1310	1415	1418	1337	1068	1240	1440	1165	895	1064	812	779	942
	Energy, ft. lbs. ...	165	503	602	720	580	382	622	846	750	450	625	420	390	960
	Trajectory, ft.	17.6	9.12	9.00	8.64	9.00	14.5	11.2	8.29	11.0	19.5	14.3	25.0	28.7	21.53
	Time, Flt., sec. ...	2.10	1.51	1.50	.147	1.50	1.86	1.67	1.45	1.66	2.21	1.89	2.50	2.68	2.32
1500 Yds.	Velocity, ft. sec....	700	996	1052	1044	998	853	992	1056	910	681	858	602	565	768
	Energy, ft. lbs. ...	95	284	350	384	319	244	396	432	450	250	409	240	210	624
	Trajectory, ft.	60.8	36.7	30.5	29.8	32.0	52.8	35.3	29.2	38.9	68.9	37.9	82.4	97.6	6 .58
	Time, Flt., sec. ...	3.90	3.03	2.76	2.73	2.83	3.45	2.97	2.70	3.12	4.15	3.08	4.54	4.94	4.08

The above table shows the velocity, energy, trajectory and time of flight of the different Newton cartridges. Also, for the purposes of comparison, similar details as to other cartridges now in use.

Note carefully, that the figures given are those realized with the barrel length ordinarily used. In case of all the Newton cartridges the barrel length is 24 inches, while with that of the Ross .280 it is 28 inches.

Increasing barrel length increase velocity in these cartridges at the rate of 37.5 feet per second for every inch over 24 inches.

Thus the .280 Newton or .30 Newton, with 30 inch barrrel, give 3225 feet per second velocity. However, this extra velocity, while it decidedly increases the power of the rifle, does not, when traveling at these high velocities, decrease the trajectory height materially, because of the greater loss of velocity due to the greatly increased air resistance to the bullet. To illustrate, at 500 yards the .30 Newton with 24 inch barrel and 3000 f.s. velocity, has a trajectory height but 1½ inches higher than that with the 30 inch barrel at 3225 f.s. velocity. At 300 yards the difference is but ¾ inch. This slight advantage in trajectory is, for sporting purposes, more than offset by the greater handiness and better balance of the shorter barrel.

TABLE OF BALLISTICS

		.250 Savage 87 gr. C-.276	.256 Newton 129 gr. C-.464	.256 Newton 140 gr. C-.528	.280 Newton 160 gr. C-.503	.280 Ross 145 gr. C-.457	.30 U. S. G. 150 gr. C-.389	.30 U. S. G. 180 gr. C-.513	.30 Newton 180 gr. C-.513	.35 Newton 250 gr. C-.40	.35 Whelen 250 Gr. Bl C-.287	.35 Whelen 250 Gr Pld C-.40	.40 Whelen 300 Gr. C-.268	.405-300 W. C. F. C-.258	.450 Cordie 480 gr. C-.284
Muzzle	Velocity, ft. lbs....	3000	2964	2920	3000	3050	2700	2600	3000	2975	2635	2635	2425	2204	2150
	Energy, ft. lbs.....	1740	2528	2660	3200	3002	2445	2700	3600	4925	3850	3850	3930	3236	4944
100 Yds.	Velocity, ft. sec....	2657	2758	2729	2809	2837	2465	2428	2812	2737	2331	2415	2102	1897	1944
	Energy, ft. lbs.	1375	2193	2310	2816	2595	2034	2376	3168	4175	3025	3250	2940	2399	4032
	Trajectory, ft.	.045	.044	.055	.043	.042	.055	.058	.043	.044	.057	.046	.071	.086	.086
	Time, Flt., sec....	.106	.105	.117	.104	.102	.116	.120	.104	.105	.121	.118	.133	.147	.147
200 Yds.	Velocity, ft. sec....	2340	2562	2562	2625	2635	2244	2263	2632	2512	2045	2204	1804	1623	1752
	Energy, ft. lbs.	1061	1883	2030	2464	2247	1686	2052	2772	3500	2325	2700	2160	1740	3264
	Trajectory, ft.	.204	.191	.213	.183	.180	.241	.244	.183	.192	.266	.248	.329	.404	.38
	Time, Flt., sec.....	.226	.219	.231	.214	.212	.243	.247	.214	.219	.258	.249	.287	.318	.31
300 Yds.	Velocity, ft. sec....	2042	2375	2387	2450	2441	2039	2130	2460	2297	1781	2003	1541	1384	1576
	Energy, ft. lbs.....	783	1625	1778	2144	1929	1392	1818	2430	2950	1750	2250	1590	1290	2640
	Trajectory, ft.	.530	.460	.496	.441	.436	.596	.521	.438	.473	.692	.615	.872	1.07	.96
	Time, Flt., sec.....	.364	.339	.352	.332	.330	.384	.361	.331	.344	.416	.392	.467	.518	.49
500 Yds.	Velocity, ft. sec....	1526	2046	2073	2117	2076	1668	1828	2130	1896	1341	1640	1152	1078	1280
	Energy, ft. lbs.	435	1213	1344	1600	1392	932	1314	1818	2000	1000	1500	900	780	1728
	Trajectory, ft.	1.98	1.39	1.54	1.42	1.42	2.04	1.77	1.41	1.59	2 59	2.07	3.38	4.16	3.31
	Time, Flt., sec. ...	.704	.591	.622	.595	.597	.709	.665	.595	.632	.806	.723	.922	1.02	.91
1000 Yds.	Velocity, ft. sec...	920	1310	1415	1418	1337	1068	1240	1440	1165	895	1064	812	779	942
	Energy, ft. lbs. ...	165	503	602	720	580	382	622	846	750	450	625	420	390	960
	Trajectory, ft.	17.6	9.12	9.00	8.64	9.00	14.5	11.2	8.29	11.0	19.5	14.3	25.0	28.7	21.53
	Time, Flt., sec. ...	2.10	1.51	1.50	.147	1.50	1.86	1.67	1.45	1.66	2.21	1.89	2.50	2.68	2.32
1500 Yds.	Velocity, ft. sec....	700	996	1052	1044	998	853	992	1056	910	691	858	602	565	768
	Energy, ft. lbs. ...	95	284	350	384	319	244	396	432	450	250	400	240	210	624
	Trajectory, ft.	60.8	36.7	30.5	29.8	32.0	52.8	35.3	29.2	38.9	68.9	37.9	82.4	97.6	6 .58
	Time, Flt., sec. ...	3.90	3.03	2.76	2.73	2.83	3.45	2.97	2.70	3.12	4.15	3.08	4.54	4.94	4.08

The above table shows the velocity, energy, trajectory and time of flight of the different Newton cartridges. Also, for the purposes of comparison, similar details as to other cartridges now in use.

Note carefully, that the figures given are those realized with the barrel length ordinarily used. In case of all the Newton cartridges the barrel length is 24 inches, while with that of the Ross .280 it is 28 inches.

Increasing barrel length increase velocity in these cartridges at the rate of 37.5 feet per second for every inch over 24 inches.

Thus the .280 Newton or .30 Newton, with 30 inch barrrel, give 3225 feet per second velocity. However, this extra velocity, while it decidedly increases the power of the rifle, does not, when traveling at these high velocities, decrease the trajectory height materially, because of the greater loss of velocity due to the greatly increased air resistance to the bullet. To illustrate, at 500 yards the .30 Newton with 24 inch barrel and 3000 f.s. velocity, has a trajectory height but 1½ inches higher than that with the 30 inch barrel at 3225 f.s. velocity. At 300 yards the difference is but ¾ inch. This slight advantage in trajectory is, for sporting purposes, more than offset by the greater handiness and better balance of the shorter barrel.

Table rotated and compressed.

This page is blank
for even page count.

The table gives the ballistics of these cartridges, together with those of the principal other cartridges in use, that their relative merits may be compared. It will be particularly noted that the Newton cartridges have much the flatter trajectory and retain their speed and power far better than any of the others.

The "Buffalo Newton" rifle is made for the following cartridges:

THE .256 NEWTON CARTRIDGE

This cartridge has become well known, since its introduction, in 1917, at which time it became the most popular cartridge in use.

It is very accurate, has a very flat trajectory, and in power is well ahead of the Springfield (or .30 U. S. G. Model 1906), which was the only other cartridge which could then be compared with it in any way. Since that time the Springfield cartridge has been equipped with a heavier bullet and speeded up until it is about even with the .256 Newton in actual power, but still has a much higher trajectory.

All the .256 Newton cartridges were formerly furnished with 129 grain bullets, as war conditions prevented all experimenting at the time they were being made, but since then we have worked out a 140 grain weight bullet which we have adopted as a standard. The old model rifles would not handle the 140 grain weight with the best accuracy, as the twist of the rifling was too slow, but our Buffalo Model, as well as the model 1922, or "Mauser Newton," has an eight inch twist instead of the 10 inch twist of the old model, so handles these bullets perfectly.

Therefore in comparing the .256 Newton with other cartridges, use the figures for the 140 grain bullet.

As reduced loads we will furnish:

A midrange load, using a 129 grain bullet at a velocity of 2000 f.s., thus a little better than the .25-35 cartridge.

A short range load, with a 100 grain bullet at 1000 f.s., which about duplicates the power of a revolver bullet, and with which small game may be shot through the body without spoiling it for food.

THE .280 NEWTON CARTRIDGE

is a new addition to the Newton series.

It was felt that there was a demand for a rifle of the utmost power which the average man could shoot with comfort, and which possessed all the other properties of the Newton series. The .256 Newton fell a little below this requirement, and .30 Newton was somewhat above it, so we produced the .280 caliber as the ideal big game cartridge.

Although the shell is of different form, the caliber and powder space of this cartridge are the same as those of the Ross .280, so it will do whatever that cartridge will do if loaded the same. However, we use in it a 160 grain bullet at a velocity of 3000 f.s., giving a striking energy of 3200 ft. lbs. This places it away beyond the power of the Springfield cartridge, even with the latest loadings, yet it has the flattest of trajectories and is not too powerful for the finest target work. When loaded with a 180 grain target bullet it is the best rifle in the world for long range accurate target shooting.

In fact, the .280 Newton may be said to be "everybody's rifle," as well as the "all around rifle."

Our 160 grain bullet has, due to its weight and sharp point, the best of carrying power, is so constructed that it does not fly in pieces when it strikes the game, but penetrates deeply, although mushrooming freely at first, and it is fired in a properly fitting barrel, thus doing away with the gross inaccuracy of the sporting model of the Ross .280, which inaccuracy was due to the slender barrel and loose fit of the bullet of that model.

In addition to the regular load above described, we will furnish:

A long range target load with 180 grain pointed bullet at 2700 f.s..

A midrange load with a 143 grain pointed bullet at 2000 f.s.

A short range load with 120 grain bullet at 1000 f.s.

We offer the .280 Newton rifle in full confidence that it will speedily become the standard big game and target rifle of the sporting world.

THE SPRINGFIELD, or .30 U. S. G., CARTRIDGE,

is also accommodated by our rifles.

This cartridge has become very popular among sportsmen the past few years, during which it has been made up with bullets of from 170 to 180 grains weight and with expanding points, and loaded to give them a velocity of about 2600 f.s., with a striking energy of 2700 ft. lbs., or practically that of the .256 Newton with 140 grain bullet. Its trajectory, however, is somewhat higher than that of the Newton cartridges.

The popularity of this cartridge depends largely on the fact that it can be procured by members of rifle clubs, etc., from the government at prices much below that of commercial ammunition, and it serves quite well as a big game cartridge.

THE .30 NEWTON CARTRIDGE

is intended for the heaviest game in this country, and for those who do not mind some recoil if they may thereby deliver more of a knockout blow on the game.

This cartridge, as we load it, has a 180 grain bullet, driven at a muzzle velocity of 3000 f.s. and with a muzzle energy of 3600 ft. lbs. It is very accurate in the hands of men who are accustomed to such recoil as it develops, and is ample for any creature found in the Western hemisphere. The recoil is not unpleasant to those who are accustomed to shooting powerful rifles.

As other loading we furnish:

A target load, consisting of a 180 grain metal patched pointed target bullet of the same type used in the National Matches by the military rifles, and driven at a velocity of 2600 f.s. This cartridge gives the same recoil as does the Springfield rifle with target load, and is intended for accurate target work. At this work it will outshoot any cartridge which is loaded to its full capacity, as we use a quicker burning powder, giving the full pressure at the chamber but falling off more rapidly than does the full charge; thus the muzzle pressure, which is what deflects a bullet, is much less than in the Springfield, hence the shooting is more accurate.

A midrange load, consisting of a 170 grain bullet driven at 2000 f.s., thus duplicating the ballistics of the .30-30, the various automatic sporting rifles, etc.

A short range load, consisting of a 115 grain bullet driven at 1000 f.s., giving about the effect of a revolver bullet.

Chauncey Thomas, the well known authority on firearms, and writer on life in the open, associate editor of Outdoor Life, Denver, Col., tried the .30 Newton and writes.

"The 'Thirty Newton' is the best hunting rifle I know of for the Rockies. It is as accurate as any Springfield, has longer range, more power, less weight. I have seen it put 6 out of 7 shots on a silver dollar circle at 100 yds, with full factory loads. Its recoil is neither more or less than the old army cartridge, the 45-70-500 black powder one, or an ordinary 12 or 10 bore duck gun and load. It can be loaded down to equal the 30-30 or on down to the 25-20, with accuracy equal to these rifles and cartridges. The .30 Newton I have been shooting weighs just seven pounds empty, and has 24 inch barrel. For a reloader the .30 Newton is the best all-around rifle I know of. It is good for everything, with proper loading, from Grizzlies to tincans."

THE .35 NEWTON CARTRIDGE

was designed for shooting the heaviest thick-skinned tropical game, but there has arisen a large demand for it from American riflemen who want the most powerful rifle they can buy. Most of these do not appreciate the power of this rifle, which is equal to that of the great English .450 cordite elephant rifles. It has already made its mark on elephant, rhino, buffalo, lion and other such game, for which it was designed. Chas. Cottar, the African hunter, reports shooting a rhino with one, striking it in the stern, the bullets raking its body the entire length and coming out the chest. It was an old rhino, and speedily became a "good" one. (October Life for January, 1921).

As reduced loads for this cartridge we will furnish:

A target load, with 200 grain pointed full metal, cased bullet at 2500 f.s. velocity. This gives about the same recoil as the Springfield with full target load.

A midrange load, consisting of a 200 grain blunt pointed bullet at 2000 f.s. velocity. This about duplicates the most powerful of the .35 caliber and .40 caliber automatic rifles.

A short range load, using a 170 grain full patched pointed bullet at 1000 f.s. This gives about the power of a heavy revolver and does not mutilate small game when shot through the body.

ALL THE NEWTON CARTRIDGES

may be loaded to give any special effect required. They may be loaded with light bullet and heavy powder charge for extreme speed at short ranges; with the long, heavy, full metal cased target bullets, at 1800 f.s., or thereabouts, for shooting geese on sand bars, turkeys at long range, etc., where the flattest possible trajectory is required, but the game must not be smashed, etc. In fact, one may obtain, by properly loading his cartridges, any particular effect desired within the limits fixed by the most powerful charges.

THE CARTRIDGE SUPPLY FOR NEWTON RIFLES was, until 1922, a serious problem, as the original firm going out of business left none of these cartridges available.

However ,the Western Cartridge Co., of East Alton, Ill., have placed on the market a full line, and we also furnish them when required, purchasing the materials and loading them ourselves up to the proper standard of velocity.

THEREFORE, NEWTON CARTRIDGES ARE NOW AS MUCH STANDARD AS ANY AND CAN BE HAD FROM THE FACTORY OR FROM THE TRADE AS EASILY AND IN AS GREAT QUANTITIES, AND AT THE SAME PRICES, AS ANY OTHER HIGH POWER CARTRIDGE.

ALL PARTS ARE STRICTLY INTERCHANGEABLE

These rifles are manufactured wholly by machinery, no hand fitting being permitted, and the parts are held strictly to gauge, so anyone wanting a new part may send and get it by mail with full assurance that it will fit perfectly. Likewise this makes all the rifles of uniform quality, instead of permitting the quality to depend upon the skill of the individual workman. The old Newton was not strictly interchangeable, therefore individual rifles varied in quality.

OUR GUARANTEE

We guarantee all goods to be free from defects of material or workmanship. In case you think you have a defective arm, send it back to us, charges prepaid, and we will examine it and determine if it is defective. In case it be found to be in any way defective in material or workmanship we will make it good and return to you carriage prepaid, and

we will also refund to you the transportation paid in sending it to us. If the complaint is not well founded we expect you to bear the transportation charge.

REPAIRING OLD MODEL RIFLES

We cannot undertake to repair Newton rifles of the old model.

We are an entirely different firm from that which made the old model rifle, that firm having been dissolved, and its effects distributed, and only Mr. Newton was ever associated with that firm. Our rifle is entirely different from the old model and none of our parts will fit the old model, and we have none of the old parts available.

Further, none of our improvements can be applied to the old model, as the construction is so different.

SOME HISTORY OF THE NEWTON RIFLE

There is considerable confusion in the public mind regarding the Newton rifles and cartridges, arising from the vicissitudes through which they have passed since being first brought to the attention of the public, therefore a little resume of the situation may be enlightening, if not interesting.

The NEWTON ARMS CO., INC., of Buffalo, N. Y., first placed the Newton rifles and cartridges on the market.

This firm was organized by Chas. Newton, of Buffalo, N. Y., who designed both the rifle and the cartridges. It began operations in 1915, began production in January, 1917, and by December, 1918, it had reached a production of 120 rifles per week.

The entry of the United States into the World War was followed by the taking over by the government, of all the cartridge factories in this country, for the army. The Newton cartridges were then special, furnished only by the above firm, who had the shells made in lots of 100,000 each by the large factories; it made the bullets and loaded the cartridges, thus furnishing an ample supply until the government took over the factories, also taking a complete unit of machinery for making shells which the Newton Company had bought but not yet set up. This prevented them from getting shells or furnishing cartridges, and thus from shipping their rifles (as they were useless without cartridges) and their income stopped. The firm then had to be carried on borrowed money till it could get machinery and make its own cartridge shells.

About January 1st, 1918, it got new machinery and began tooling it up to make shells, finishing this work about April 15th, 1918.

Meantime the banks from whom it had borrowed money allowed it to finish tooling up the plant and get into production of cartridges, when, on April 20th, 1918, they threw it into a receivership and had it operated by the receiver till August 1st, 1918 when they shut it down.

THE RECEIVER finished about 1200 rifles and had about 400 more ready for assembly, when he shut down. The old company had put out about 2400 before the receiver took charge, so there were about 4000 made in all. Mr. Newton went out of the firm immediately after the receiver went in, and of the rifles made by the receiver only about 400 passed his own inspector, the workmanship on them was so poor, leaving 1000 rejected rifles on his hands, which he sold at about $5.00 each when the plant was sold.

The NEWTON ARMS CORPORATION was incorporated by some New York City dealers in second hand machinery who bought the plant from the receiver, and who formed the corporation for the purpose of marketing those defective rifles bought from the receiver, as genuine Newton rifles. They began advertising in July, 1919.

Mr. Newton brought three lawsuits against this firm, one to procure an injunction restraining them from representing that he was associated with them, another to restrain them from representing that they owned the patents, and a third to restrain them from using the word "Newton" as part of their corporate name. The cases could not be tried till June, 1920, when they were disposed of and Mr. Newton won all three, obtaining judgments awarding the injunctions asked for. These injunctions prevented any further marketing of the rifles upon Mr. Newton's reputation, and the Newton Arms Corporation went into bankruptcy in July, 1920, and was wound up.

On the sale of the effects of that corporation there were about 250 of those condemned rifles still on hand; they were bid in by Kirtland Bros. & Co., of New York City, who have since been selling them off as and for what they were, rifles made by the receiver of the old company.

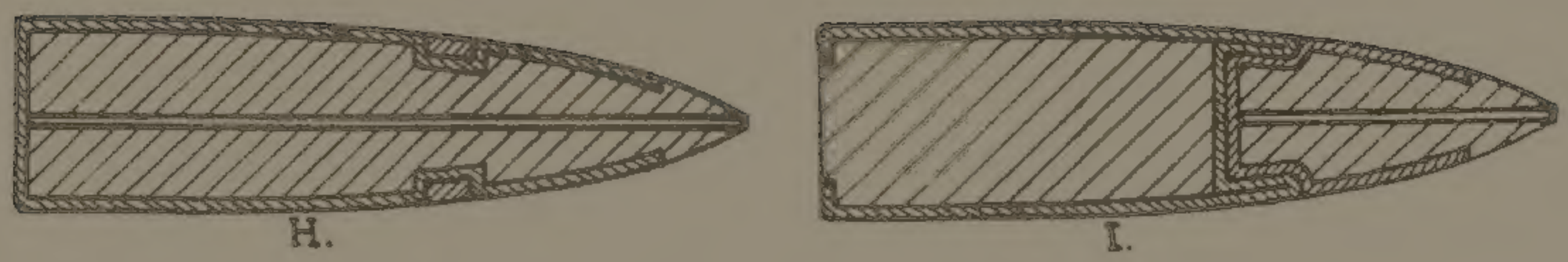
The CHAS. NEWTON RIFLE CORPORATION, was organized by Mr. Newton in May, 1919, as a means of combating the misrepresentations of the Newton Arms Corporation concerning the defective rifles which the latter had bought from he receiver of the old company. It had no rifles to deliver, but it advertised rifles, and got out and sent to inquirers a little catalogue, which was incidental, also a statement as to the facts concerning the defective rifles being offered by the Newton Arms Corporation, which

was its real purpose. Thus it spread among the riflemen, so far as possible, the warning against those defective Newton rifles.

In 1921, enlisting a little capital, it started the business of having rifles made to its special order, with the regular Mauser action, with the latest Newton set trigger and with the Newton design of stock and barrel and for the .256 Newton cartridges. Mr. Newton went to Germany and placed orders for a lot of these rifles, but they were not delivered in time, and when they finally arrived conditions had so changed in Germany that no more could be had except at prices prohibitively high, so that project was abandoned. This firm will be dropped when those rifles are sold.

The BUFFALO NEWTON RIFLE CO., was organized by Mr. Newton in the spring of 1923, to manufacture the Buffalo Model Newton rifle, which is described in the foregoing pages. It has no relation to any of the foregoing companies.

BUFFALO NEWTON RIFLE CO.
1081-5 Ellicott Square,
Buffalo, N. Y.



H.

I.

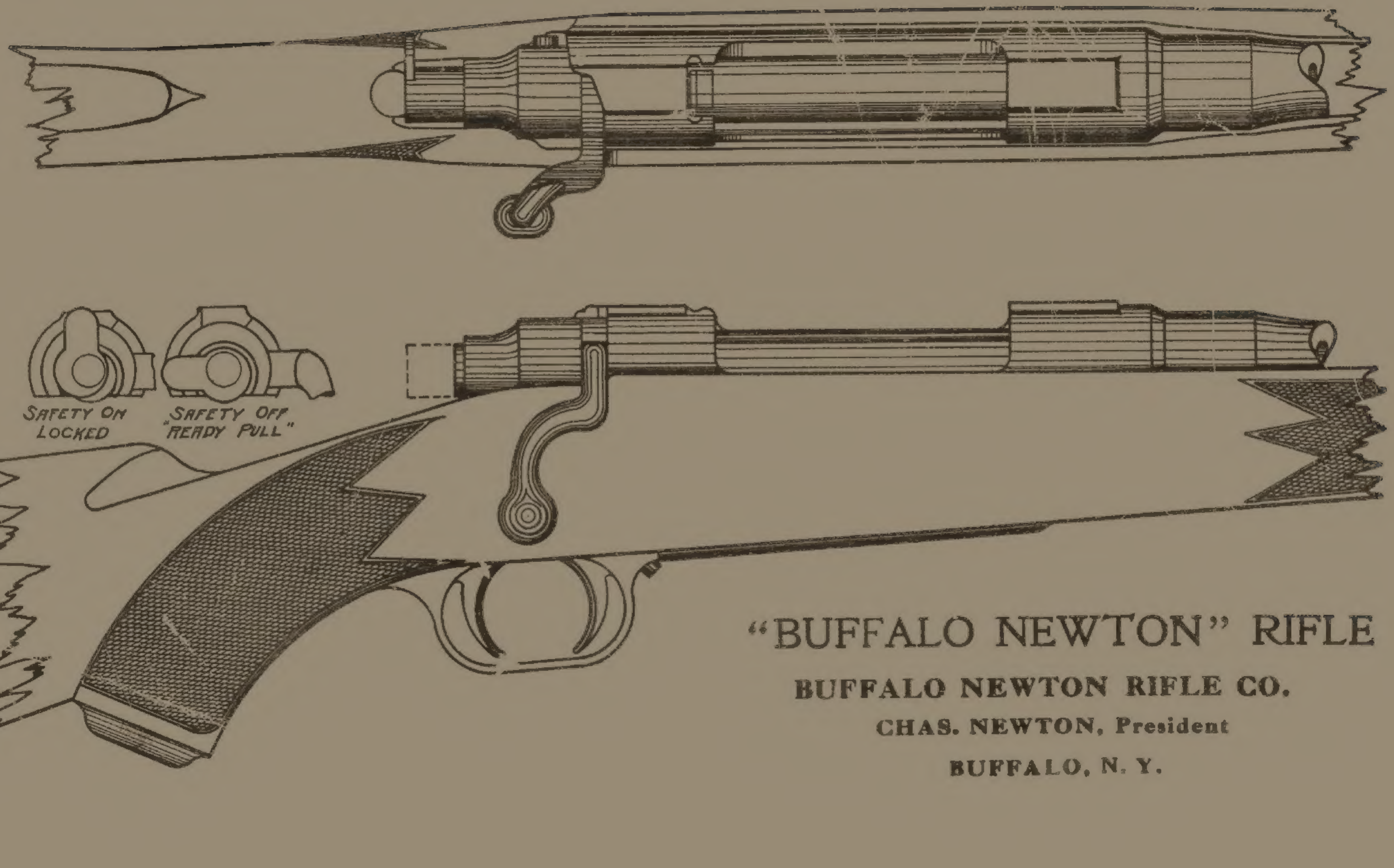

WESTERN
256 NEWTON
.256 NEWTON
F.M.P. EXPANDING

WESTERN
280 NEWTON
.280 NEWTON
F.M.P.
OPEN POINT EXPANDING


WESTERN
30 G. 1906
.30 SPRINGFIELD
F.M.P. POINTED .06


WESTERN
.30 NEWTON
F.M.P.
OPEN POINT EXPANDING


WESTERN
.35 NEWTON
F.M.P.
OPEN POINT EXPANDING



"BUFFALO NEWTON" RIFLE

BUFFALO NEWTON RIFLE CO.

CHAS. NEWTON, President

BUFFALO, N. Y.